INDEX OF AUTHORS' NAMES.

ABSTRACTS. 1899. Parts I & II.

(Marked A. i and A. ii respectively); and also to Transactions, 1899; (marked T.); and to Proceedings of the Session 1898-1899, Nos. 198 to 212, Nov., 1898—June, 1899 (marked P.).

Abderhalden, Emil, relations between the growth of the progeny and composition of the milk, and between the ash of the progeny and that of the milk, A., ii, 232.

- a comparison of the ash of the young animal and that of the milk,

A., ii, 568.

Abegg, Richard, stability of stereoisomeric oximes in presence of acids and alkalis, A., i, 327.

Abegg, Richard, and Guido Bodländer, electro-affinity: a new principle of chemical classification, A., ii, 542.

Abegg, Richard, and W. Seitz, dielectric constants and aggregation changes of alcohols at low temperatures, A., ii, 623.

dielectric behaviour of a crystalline liquid, A., ii, 623.

Abel, John J., epinephrine, A., i, 395.

Abelous, E., and Ernst Gérard, presence in the animal organism of an enzyme capable of reducing nitrates, A., ii, 680, 681.

Abraham, A., detection of salicylic acid

in wine, beer, &c., A., ii, 341.

Abraham, Henri. See Louis Marmier.

Ach, Friedrich. See Emil Fischer.

Ackermann, Edwin, testing milk

nitrates, A., ii, 248.

Ackermann, Wilhelm, estimation of nitric acid, A., ii, 329.

Ackroyd, William, researches on moorland waters. I. Acidity, T., 196; P., 1899, 1; discussion, P., 2.

Adie, Richard Haliburton, note on the

reactions between sulphuric acid and the elements, P., 1899, 132.

VOL. LXXVI. ii.

Adrian, L. Alphonse, and Auguste Trillat, new crystalline substance present in wormwood, A., i, 301.

- anabsinthin, A., i, 377.

Adriance, Vanderpoel, and John S.
Adriance, human milk, A., ii, 115. Aebi, Walther. See Friedrich Kehrmann.

Ahrens, C., and P. Hett, estimation of perchlorate in Chili saltpetre, A., ii, 245.

Ahrens, Felix B., staphisagroine, A., i, 652.

Aitken, Andrew P., currant bushes failing to bear fruit: investigation into the cause: composition of the soil, A., ii, 447.

feeding experiments, 1897, A., ii, 448.

experiments with nitragin, A., ii, 512.

Albahary, Jacques M., a product of the decomposition of albumin, A., i, 95.

Albanese, Manfredi, formation of 3methylxanthine from caffeine in the animal organism, A., ii, 777.

Alberda van Ekenstein, William, and Cornclis A. Lobry de Bruyn, benzylidene compounds of hydroxy-acids, A., i, 904.

Alberda van Ekenstein, William. also Cornelis A. Lobry de Bruyn.

Albert, Robert, artificially increasing the quantity of zymase in yeast, A., ii, 783. Albitzky, Alexius, chlorostearic acid, A., i, 861.

- action of acetic anhydride on fatty

acids, A., i, 862.

isomerism of oleic and elaidic acids. and of erucic and brassidic acids, A., i, 862.

М. Albitzky, Alexius. See also Emeljanoff.

Albro, Alice H. See Russell H. Chitten-

Alessandrello, P. See Amerigo Andre-Alexander, Hans, action of acetylene on

copper, A., i, 843.

Alex6eff, Wladimir, clay from Russia, A., ii, 673.

Alfa, J. See Rudolph F. Weinland. Alffers, F. See Paul Jannasch.

Allain Le Canu, Jules, action of phenylhydrazine on alkylic bromides, chlorides, and iodides, A., i, 808.

Allaire, H., artificial boracites containing iodine, A., ii, 156.

Allan, F. B., vapour tension of concentrated hydrochloric acid solutions, A.,

Allen, Richard William, the maximum pressure of naphthalene vapour, P., **1899**, 122.

the maximum vapour pressure of camphor, P., 1899, 135.

Allendorff, H. See Karl Auwers.

Aloy, Jules [François,], double chlorides and bromides of uranium, A., ii, 555. - uranium compounds, A., ii, 599.

Alperin, D., and Stanislaus von Kostanecki, 2'-ethoxy-α-naphthaflavone, A., i, 524.

Alvisi, Ugo, new explosive and detonating materials, A., ii, 414, 647, 748.

formation of red mercuric sulphide in the wet way, A., ii, 486.

Alvisi, Ugo. See also Arturo Miolati, Emmanuele Paternò.

Amort, E. See Alfred Partheil.

Ampola, G., and V. Recchi, action of amines and of amides on acenaphthenequinone, A., i, 918.

Ampola, G., and C. Rimatori, cryoscopic behaviour of orthonitrophenol, A., ii, 353.

Ampola, G., and C. Ulpiani, reducing action of denitrifying bacteria, A., ii, 443.

Amthor, Carl, causes of rancidity of butter, A., ii, 259.

Anderlini, Francesco. See Raffaele Nasini. Anderson, J. A. See Richard Fischer. Anderson, W. Carrick, new form of

potash bulb, A., ii, 577.

Anderson, W. Carrick, and Andrew Smith, estimation of iodine by sodium thiosulphate in the presence of cyanides, A., ii, 574.

André, Gustave, distillation of mixtures of pyridine and aliphatic acids, A.,

- furfurylic alcohol, A., i, 578.

André, Gustave, constitution of natural humoid substances, A., ii, 119.

- action of calcium oxide and carbonate on certain humoid substances, A., ii, 120.

- earbon in humic substances, A., ii, 449.

André, Gustave. See also Marcellin Berthelot.

Andreocci, Amerigo, an optically active partially racemic compound, A., i, 931.

relations of 2:4-pyrrodiazole to benzene and to cyclic compounds of the pyridine and pyrroline types, A., i, 947.

relations between optical isomerism and triboluminescence, A., ii, 719.

Andreocci, Amerigo, and P. Alessandrello, resolution of inactive isosantonous acid into its dextro- and lævocomponents by means of cinchonine, A., i, 931.

Andreocci, Amerigo, and P. Bertolo, two new desmotroposantonins, A., i, 301.

Andreocci, Amerigo, and V. Mannino, oxy-compounds of pyrrodiazole, A., i, 946.

Andrlik, Karl, influence of sucrose on the estimation of pentosans by the phloroglucinol method, with special reference to products from sugar refineries, A., ii, 817.

Andrlík, Karl, and Emil Votoček, beetroot-resin acid, A., i, 157.

Angeli, Angelo, nitro-derivatives, A., i, 681.

Angeli, Angelo, and Matteo Spica, nitroso-

indoles, A., i, 938.

Angelico, F. See Matteo Spica.

Annan, J. G., apparatus for the saponification of fats, A., ii, 343.

Anschütz, Richard, constitution of tartrazine, A., i, 638.

Anschütz, Richard, and Thomas Clarke, synthesis of methylocitric [methoxytricarballylic] acid from oxalic and malonic acids, A., i, 577.

Anschütz, Richard, and Julius Stiepel, action of ammonia and substituted ammonias on methylic dichloroxalate and on methylic semiorthoxalate: diamido-esters, A i, 572.

Anschütz, Richard. See also Hans Geisenheimer.

Antipost, J. A., lonchidite from Olkusch, A., ii, 109.

- thallium in marcasite from Poland, A., ii, 667.

Antony, Ubaldo, potable waters that have flowed through lead pipes. A., ii, 290.

Antony, Ubaldo, and Adolfo Lucchesi, action of sulphurous anhydride on ruthenium sulphate, A., ii, 299.

- estimation of the total sulphur in coal, A., ii, 517.

- ruthenium and its compounds, A., ii, 558.

- ruthenium and its compounds. Potassium ruthenichloride, A., ii, 756.

Antony, Ubaldo, and E. Manasse, action of sulphurous acid on metallic sulphates, especially ferric sulphate, A., ii, 753.

Antony, Ubaldo, and G. H. Mondolfo. Reynoso's method for the analysis of phosphates, A., ii, 330.

Apitzsch, H. See Carl Paal.

Archbutt, Leonard, the arachidic and lignoceric acids of earth-nut oil, A., ii, 260.

- the constants of curcas oil, A., ii, 261.

 arachidic acid in rape and mustard oils, A., ii, 340.

- maize oil (corn oil), A., ii, 711. Archibald, E. H. See James G. Mac-

Arlt, F. von, pseudocinchonine and the behaviour of hydrochlorocinchonine, A., i, 962.

Armstrong, rmstrong, Henry Edward, an explanation of the laws which govern substitution in the case of benzenoid compounds (third notice), P., 1899, 176.

Arnaud, Albert, action of nitric acid on ouabain, A., i, 70.
Arndt, Kurt. See Georg von Knorre.

Arndt, Kurt. See Georg von Knorre. Arnold, V., Heller's test for detecting

blood in urine, A., ii, 194. Arrhenius, Svante, ch velocities, A., ii, 359. chemical reaction

Arsonval, Arsène d', action of certain gases on caoutchouc, A., i, 771.

Arth, Georges, caustic lime in ancient

masonry, A., ii, 483.

-dissolution of an iron anode in a solution of sodium acetate and acetic

acid, A., ii, 723.

Arzruni, Andreas, Konstantin Thaddéeff, and A. Dannenberg, new minerals from Chili, A., ii, 562.

Aschan, [Adolf] Ossian, preparation of amides, A., i, 14.

- camphoronic acid, A., i, 68.

- stereochemistry of quinquevalent nitrogen and quadrivalent sulphur, A., i, 542.

- formation of adipic acid from the fraction of Russian petroleum which boils at 80°, and consists of naphthenes, A., i, 672.

Aschman, Camille, estimation of the iodine number, A., ii, 71.

—— estimation of total phosphoric acid

in basic slags, A., ii, 807.

See also Louis Aschman, Camille. Henry.

Asher, Léon, properties and formation of lymph, A., ii, 165.

Asher, Léon, and Horatio C. Wood, influence of choline on the circulation, A., ii, 373.

Aston, Henry. See Percy F. Frankland. Astruc, A. See Henri Imbert.

Athanasiu, J., glycogen in the frog at

different seasons, A., ii, 438. - fat in the animal body under the influence of phosphorus, ii, 441.

Atkinson, Elizabeth A., indium in tungsten minerals, A., ii, 600.

separation of metals by means of hydrogen bromide, A., ii, 615. Atterberg, Albert, modification of Kjel-

dahl's process, A., ii, 124.

- methods for estimating potassium. and the best precipitants of platinum, A., ii, 125.

Edmond van, Aubel. thermal conductivity of liquids, A., ii, 354.

Auchy, George, rapid estimation of tungsten in steel, A., ii, 524.

Auden, Harold Allden, William Henry Perkin, jun., and J. L. Rose, experiments on the synthesis of camphoric acid, Part II. T., 909; P., 1899, 162.

Auerbach, Max, and Richard Wolffenstein, action of hydrogen peroxide on tertiary bases, A., i, 935.

Auger, Victor, preparation of glycocine, A., i, 667.

 vacuum regulator for distillations under reduced pressure, A., ii, 474.

Austin, Martha. See Frank Austin Gooch.

Autenrieth, Wilhelm, action of dilute acids on potassium ferrocyanide, A., ii, 387.

- occurrence of iodine in cuprite and malachite, A., ii, 760.

- [detection and estimation of small amounts of iodine in cuprite and malachite], A., ii, 804.

Autenrieth, Wilhelm, and K. Wolff,

trimethylene mercaptan and the trimethylenedisulphones, A., i, 579.

- cyclic disulphides and disulphones, A., i, 580.

Auwers, Karl, isomeric tribromo-derivatives of pseudocumenol, A., i, 343.

Auwers, Karl, and H. Allendorff, anhydroparahydroxymesitylic alcohol and its products of change, A., i, 32.

Auwers, Karl, and G. Büttner, bromination products of saligenin, A.,

Auwers, Karl, and H. Czerny, Beckmann's transformation, A., i, 131.

Auwers, Karl, and H. Ercklentz, parahydroxypseudocumylic alcohol and its products of bromination, A., i, 35.

Auwers, Karl, and F. Rapp, nitration and oxidation products of phenols which are soluble in alkalis, A., i, 30.

Auwers, Karl, and H. van de Rovaart, derivatives of anhydroparahydroxyortho-xylylic alcohol and of anhydroorthohydrox; pseudocumylic alcohol, A., i, 34

Auwers, Karl, and A. J. Walker, constitution and cryoscopic behaviour of orthocyanophenols, A., i, 198.

Auzenat, R., nitrification of glycerol with nitrous acid, A., ii, 132.

Avery, Samuel, and Benton Dales, sources of error in the electrolytic estimation of iron, A., ii, 251.

- presence of carbon in electrolytically deposited iron, A., ii, 814. Axelrod, S. See Wilhelm Marckwald.

B.

Babel, A. See Philippe A. Guye. Bach, A., formaldoxime as a reagent for detecting traces of copper, A., ii, 385. Baebenroth, Fr. See Emil Knoeven-

agel.

Bäckström, Helge, thaumastite from Skottvång, Sweden, A., ii, 36.

Baeyer, Adolf von, and Conrad Baumgartel, orientation in the terpene series. XXIII. Hydroxycarone and ketoterpin, A., i, 223.
Baeyer, Adolf von, and Victor Villiger,

orientation in the terpene series. haustive bromination of isogeraniolene

and of ionene, A., i, 921.

Bagnall, Ernest Harold, methanetrisulphonic acid, T., 278; P., 1898, 182.

Bahatrian, Gabriel. See Friedrich

Kehrmann.

Bailey, Edgar Henry Summerfield, and Wm. Lange, action of sulphuric acid on strychnine when separating this alkaloid from organic matters, A., ii, 194.

Bailey, George Herbert, and J. Johnston, analysis of water, A., ii, 697. Bailey, James. See Johannes Thiele.

Baillie, Thomas B., and Julius Tafel, reduction of acylamines to alkylamines, A., i, 268.

Bain, William, and Wilfrid Edgecombe. excretion of urea and uric acid, A., ii, 314.

Baker, Julian Levett. See Arthur R. Ling.

Baker, T. J., and T. J. Baker, jun., electro-deposition of brass, A., ii, 749.

Balbiano, Luigi, constitution of camphoric acid, A., i, 537.

- oxidation products of camphoric acid, A., i, 867.

Baldwin, Herbert B., toxic action of sodium fluoride, A., ii, 605.

Balland, composition and feeding value of millet, A., ii, 118.

- composition and feeding value of French haricots, A., ii, 174.

Baltzley, Edwin B. See Charles D. Mabery.

Bamberg, F. See Ludwig Gattermann. imberger, Eugen, the se 'nitroazoparaffins," A., i, 108 Bamberger, so-called

- mercurial compounds of β -naphthol, A., i, 156.

- mercurydimethyl, A., i, 263.

--- alphylhydroxylamines, A., i, 270. hydrolysis of mixed azo-compounds, A., i, 355.

- oxidation of aromatic bases, A., i, 495.

- action of diazo-compounds on oximes, A., i, 589.

- detection and isolation of ketones and aldehydes, A., i, 666.

- conversion of phenylhydrazine into diazobenzene, A., i, 688.

- action of benzenesulphonic chloride on asymmetrical alkylphenylhydrazines, A., i, 701.

 acetylation of α-naphthylamine, A., i, 708.

a new class of diazo-compounds: triazolens, A., i, 720.

- anhydro-formation of \$\beta\text{-naphthol-}

azo-dyes, A., i, 722.

— history of diazonium salts, A., i, 750.

- demonstration of the laws of mass action as applied to weak electrolytes, A., ii, 548.

- detection of hydroxylamine, A., ii, 576.

Bamberger, Eugen, Hans Büsdorf and B. Szolayski, action of hydrogen chloride and hydrogen bromide on nitrosoalphyls, A., i, 341.

Bamberger, Eugen, and Anton von Goldberger, characteristic oxidation reaction of some cyclic amines, A., i, 170.

- - action of alkalis on orthomethyldiazonium salts, A., i, 543.

Bamberger, Eugen, and Roland Scholl, the so-called benzil reaction, A., i, 701.

Bamberger, Eugen, and Fred Tschirner, oxidation of aromatic bases, A., i, 347. - dimethylaniline oxide, A.,

i, 682.

orthamidodimethylaniline, A., i, 683.

- direct conversion of aniline into phenylhydroxylamine, A., i, 687. Bamberger, Eugen, and Max Weiler, reduction of 2-nitro-3:5-dimethylphenylnitromethane [ω-2-dinitromesitylene],

A., i, 123. Bamberger Max, and Anton Landsiedl, natural resins [Uberwallungsharze],

A., i, 929.

Bancroft, Wilder Dwight, equilibria of stereoisomerides, A., ii, 145, 411.

variance of the voltaic cell, A., ii, 394. electromotive force between amal-

gams, A., ii, 395. - transference number of hydrogen,

A., ii, 398. pressure-temperature diagrams for

binary systems, A., ii, 402.

 dissociation studies. I. A., ii, 411. -- ternary mixtures, A., ii, 469.

Bang, Ivar, guanylic acid from pancreas and its decomposition products, A., i, 179.

- histons, A., i, 836.

Barbier, Philippe, pulegenacetone, A., i, 299.

 synthesis of dimethylheptenol, A., i, 323.

-lemonal from the essential oil of Lippia citriodora, A., i, 769.

Barbier, Philippe, and Victor Grignard, ethylic β-isopropylacetobutyrate and stereoisomeric di-isopropylbutenedi-

carboxylic acids, A., i, 112.

Barbier, Philippe, and Georges Léser, dextrolicarhodol, A., i, 100.

 acetylmethylheptenone (2methyl-2-nonene-6: 8-dione), Α., i, 110.

Barfield, C. E. See T. C. Whitlock. Barillé, A., dicalcium phosphate, A.,

Barker, E. R. See S. P. Mulliken.

Barlow, Alfred E., dykes containing huronite, A., ii, 565.

Barlow, Willy. See Johannes Thiele. Barmwater, F., cause of osmot pressure, A., ii, 274. cause of osmotic

conductivity of mixtures of electrolytes, A., ii, 396.

Barnes, Bayard. See Henry Lord Wheeler.

Barnes, H. T., molecular weight of sulphur in carbon bisulphide solutions, A., ii, 415.

Barnes, H. T., and A. P. Scott, solution densities, A., ii, 405.

Barral, Étienne, colour reaction anhydrosulphuric acid, A., ii, 123.

Barral, Etienne, and Albert Morel, phenylic chlorocarbonates, A., i, 747,

Barralet, Edgar S., delicate reaction of hydrogen peroxide, A., ii, 803.

Barratt, [John Oglethorpe] Wakelin, elimination of water and carbonic anhydride by the skin, A., ii, 313.

Barratt, Wakelin. See also Frederick Walker Mott.

Barrillot. See Léo Vignon.

Barth, Georg, decomposition of cement under the influence of bacteria, A.,

Barth, Hermann, microchemical proof of the presence of alkaloids in medicinal drugs, A., ii, 46.

Barth, Max, analysis of wines, A., ii, 699.

Barthe, Léonce, estimation of sulphur and alkalis in liver of sulphur, A., ii, 329.

Bartolotti, Pietro, derivatives of benzophenone, A., i, 368.

Barvíř, Jindřich Ladislav, fibrous forms of silica from Moravian serpentines, A., ii, 671.

Base, Daniel, double halogen salts of zinc with aniline and the toluidines, A., i, 40.

Baskerville, Charles, occurrence of vanadium, chromium, and titanium in peats, A., ii, 666.

Basset, Henry, reduction of chromic acid by acetic acid and its effect on anthracene testing, A., ii, 815.

Baubigny, Henri, separation and estimation of the halogens in their silver compounds, A., ii, 244, 328.

 detection, separation, and estimation of bromine in the presence of excess of chlorides, A., ii, 516.

- detection and estimation of small quantities of chlorine in presence of large quantities of bromine, A., ii, 611.

Baucke, H., technical examination of ferruginous pigments, A., ii, 128.

Baude, S., and Albert Reychler, piperonal derivatives, A., i, 142.

Bauer, a delicate test for solanine, and the amount yielded by potatoes, A., ii, 392.

Bauer, Eugen. See Carl Haeussermann.

Bauer, Max, rocks and minerals from

the Seychelles, A., ii, 565.

Baugé, Georges, new hydrate of the saline oxide of chromium [Cr₃O₄], A., ii, 157.

Baum, Fritz, apparatus for extracting liquids with ether, A., ii, 802.

Baum, Herm., and Richard Seeliger, action of copper on the animal organism, A., ii, 167.

Baumann, Karl, detection of maize starch in wheat flour, ii, 703.

Baumann, Karl, and A. Bömer, precipitation of albumoses by zinc sulphate, A., ii, 195.

Baumert, Georg, and Fr. Falke, changes in butter produced by feeding with fat, A., ii, 689.

Baumgärtel, Conrad. See Adolf von Baever.

Baur-Breitenfeld, H. von. See Max Busch.

Baxter, Gregory Paul. See Theodor W. Richards.

Bayrac, Pierre Henri, preparation of paraquinones from indophenols, A.,

Beatty, W. A. See J. H. Kastle. Beck, K. See Ludwig Gattermann.

Becke, Friedrich [Johann], [rock analyses], A., ii, 500.

Becker, J. See Max Busch.

Beckh, Walter, ethylic α-phenylaceto-acetate, A., i, 211.

Beckurts, Heinrich, ureides and acylated alkylic carbamates, A., i, 795.

Beckurts, Heinrich, and W. Grothe, evaluation of Secale cornutum (ergot of rye), A., ii, 389.

Beckurts, Heinrich, and Julius Troeger, ethereal oil of Angostura bark, A., i, 64.

Heinrich. See Beckurts, also G. Frerichs.

Becquerel, Henri, anomalous dispersion of incandescent sodium vapour, A.,

radiations from uranium and other substances, A., ii, 393.

Bednarski, E. See Stanislaus von Kos-

tanecki.

Beeson, Jasper L., nitric nitrogen produced by the pea, A., ii, 175.

Béhal, Auguste, a new series of cyclic ketones, A., i, 121.

- mixed anhydrides of formic acid, A., i, 734.

Behrend, Robert, two modifications of ethylic 8-amidocrotonate, A., i, 331.

Behrens, Johannes, tobacco plant, A., ii, 795.

Bein, Willy, dependence of the transference ratio of salts on the nature of the dividing membrane, A., ii, 398.

Bekaert, A. See Alexander von Hemptinne.

Beketoff, Nicolai N., direct determination of heats of combustion of halogen compounds: aluminium bromide, A., ii, 726.

Bell, E. Wightman, estimation of potash, A., ii, 809.

Belugou, Guillame, etherification of phosphoric acid by the aid of methylic

alcohol, A., i, 659.

Bemmelen, Jacobus Martinus van, absorption. II. Formation of colloids, and their structure, A., ii, 12.

- absorption. III. Hydrogels, A., ii, 84.

- chalybite and vivianite in Dutch peat, A., ii, 371.

-absorption. IV. Colloidal oxide, A., ii, 487.

- ferric "hydrogel," A., ii, 599.

Bénard, H. See E. Mascart.

Benda, Louis. See Paul Monnet.

Bender, Carl, refraction of pure water and of normal salt solutions, A., ii, 621.

Bènech, Elophe, toxalbumin from the common eel, A., ii, 439.

Benedicks, Carl, thalénite, a new mineral, A., ii, 766.

Benedict, Francis Gano, and Olin F. Tower, use of compressed oxygen and soda lime in organic analysis, A., ii, 520.

Benevento, Alberto, orthobromoparanis-

idine, A., i, 349.

Benker, C. See Carl Paal.

Bennett, J. F., jun., modification of Pierce's method for the estimation of arsenic in ores, A., ii, 519.

Benz, G., estimation of dry substance in glycerol, A., ii, 816.

Berend, Ludwig, and Joachim Herms, action of hydrazine hydrate on acenaphthenequinone, A., i, 823.

Berendes, R. See Ludwig Gattermann. Berg, Armand, double iodates of manganese dioxide [double manganic iod-

ates], A., ii, 426.

Bergesio, B., and Luigi Sabbatani, formation of pentabromacetone from acetone, A., i, 733.

Bergsöe, Paul, barium platinocyanide, and platinum free from iridium, A., i, 320. Berju, G. See Friedrich Krüger.

Berkey, Charles P., Minnesota minerals, A., ii, 371.

Berlemont, G. See Paul Bourcet. Bernert, Richard, oxidation of albumin with permanganate, A., i, 315.

Bernhard, Carl. See Carl Adam Bischoff. Bertè, E. See Arturo Soldaini.

Berthelot, Daniel, recalculation of atomic weights by the method of limiting den-

sity, A., ii, 207.

an equation representing the molecular weight of liquids in terms of their densities and critical constants, A., ii, 404.

- increase of pressure caused by the mixture of two gases, and the compressibility of the mixture, A., ii, 466.

 calculation of the compressibility of a gaseous mixture from that of its

components, A., ii, 466.

Berthelot, Daniel, and Paul Sacerdote, mixtures of gases and their compressibility, A., ii, 404.

- Berthelot, Marcellin Pierre Eugène, synthesis of phenol from acetylene, A., i, 264.
- action of sulphuric acid on acetylene, A., i, 397.
- absorption of oxygen by potassium pyrogallol, A., i, 427.
- synthesis of ethylic alcohol, A., i, 471.
- chemical action of the silent electric discharge on carbon compounds, A., i, 657.
 - hydration of acetylene, A., i, 841. --- double cyanides, A., i, 846.
- -action of argon and nitrogen on mercury methyl and mercury phenyl, A., i, 871.
- trimethylene [cyclopropane], A., i, 872.
- relation between luminous energy and chemical energy, A., ii, 1.
- decomposition of nitric acid by heat at moderate temperatures, A., ii, 21.
- action of free hydrogen on nitric acid, A., ii, 21.
- decomposition of water by chromous salts and their use for the absorption of

oxygen, A., ii, 30.

heats of formation of cyanic acid and carbamide, A., ii, 142.

decomposition of hydrogen peroxide by silver oxide, and by ammoniacal silver oxide, A., ii, 149.

- relation between luminous energy and chemical energy. The reciprocal displacement of oxygen and the halogens, A., ii, 197.

 heat developed on adding water to excess of sulphuric acid, A., ii, 271.

- combustion of mixtures of hydrogen and oxygenated gases, A., ii, 282.

-action of hydrogen on sulphurous anhydride, A., ii, 282.

Berthelot, Marcellin Pierre Eugène, action of sulphuric acid on metals A., ii, 283.

heat evolved by the action of water on excess of nitric acid, A.,

- action of sulphuric acid on carbon at low temperatures, A., ii, 286.

chemical equilibrium between hydrogen and the oxides of carbon, A., ii, 286. reactions with carbon oxysulphide,

A., ii, 287. - action of alkali chlorides on silver,

A., ii, 288. [chlorine, phosphorus, and sulphur in plants], A., ii, 323.

presence and estimation of chlorine

in plants, A., ii, 327.

- estimation of phosphorus sulphur in plants and plant ashes, A., ii, 330.

- action of hydrogen sulphide and alkali sulphides on double cyanides: cyanosulphides, A., ii, 421.

- estimation of sulphur in organic

compounds, A., ii, 575.

-combination of carbon disulphide with hydrogen, nitrogen, [argon and carbonic oxide], A., ii, 648.

-combination of nitrogen with oxygen, A., ii, 648.

- argon and its combinations, A., ii, 653.

- formation of alcohol and carbonic anhydride, and absorption of oxygen in plant tissues, A., ii, 685.

- thermochemical measurements, A., ii, 726.

- equilibrium between hydrocyanic and other acids in combination with alkalis, A., ii, 737.
- Berthelot, Marcellin, and Gustave André, simple and complex magnesium pyrophosphates, A., ii, 156.

general progress of vegetation, A., ii, 319.

- heats of combustion and formation of organic compounds, A., ii, 400.

Berthelot, Marcellin, and Marcel Delépine, ammonio-silver nitrate, ii, 748.

 silver derivatives of acetylene, A., i, 841.

Berthelot, Marcellin, and Henri Le Chatelier, velocity of explosion of acetylene, A., ii, 734.

Berthelot, Marcellin, and Paul Vieille, explosion of acetylene when mixed with inert gases, A., ii, 412.

Bertini, Corrado, ethylic benzalanilacetoacetate [anilinobenzylacetoacetate], A. i, 896.

Bertolo, P., reaction of santonin and the desmotroposantonins with ferric chlor-

ide, A., i, 931.
Bertolo, P. See also Amerigo Andreocci.
Bertozzi, V., constitution of dichloro-

paracresol, A., i, 877.
Bertrand, C. Eg., preliminary generalisation on humous coal, A., ii, 161.

- humic lignite and humin, A., ii, 430. Bertrand, Gabriel, laccase, a new oxidising ferment, A., i, 313.

- molecular aggregation of dihydroxy-

acetone, A., i, 860.

action of the sorbose bacterium on xylose (wood sugar), A., ii, 44.

action of the sorbose bacterium on aldoses, A., ii, 170.

- silicotungstic acid as a reagent for alkaloids, A., ii, 456.

Best, Friedrich. See Max Busch.

Bethmann, Fritz, ortho-xylalphthalide, A., i, 520.

Betti, Mario, desmotropic forms of camphor methylenephenylhydrazone, A., i, 771.

Bettinelli, D. See Giuseppe Plancher. Bettink, Hendrik Wefers, detection of cobalt in the presence of iron compounds, A., ii, 815.

Bevan, Edward John. See Charles Frederick Cross.

Bianchi. See Emilio Noelting.

Bianchi, Al. See Wenzel Hanzlik. Bickel, Adolf, estimation of dextrose, A., ii, 529.

Biedermann, Wilhelm, and P. Moritz, comparative physiology of digestion. II. An enzyme which dissolves cellulose in the secretion of the liver of the snail, Helix pomatia, A., ii, 166.

- comparative physiology digestion. III. Function of the socalled liver of molluses, A., ii, 438.

Bierbrauer, Karl. See Arthur Rosenheim.

Bihan, Richard. See Johannes Thiele. Itris, Alfred, phenol-quinones and quinhydrones: mixed phenol-quin-Biltris, Alfred, ones, A., i, 199.

Biltz, Heinrich, triphenylvinylic alcohol or triphenylethanone, A., i, 439.

- oxidation of benzaldehydephenylhydrazone and salicylaldehydephenylhydrazone by air, A., i, 502.

 nitrosalicylaldehydephenylhydrazones, A., i, 503.

Biltz, Heinrich, and Albert Wienands, oxidation \mathbf{of} aldehydephenylhydrazones to a-diketoneosazones, i, 910.

Biltz, Wilhelm, cryoscopic researches on the terpene series, A., i, 297.

Biltz, Wilhelm, essential oil of Origanum majorana, A., i, 535.

— cryoscopic behaviour of alcohols,

A., ii, 634.

Biron, Eugen von, decomposition of barium isobutylic sulphate, A., i, 408.

Bischoff, Carl Adam, formation of XXVII. chains. Benzylaniline. XXVIII. Diphenylamine, A., i, 125. formation of chains. XXXII.

Comparison of aromatic bases in their behaviour towards ethereal salts of

a-bromo-acids, A., i, 202.

formation of chains. XXXV. Formaldehyde and diacid bases, A., i, 279. formation of chains. Ethylic salts of a-bromo-fatty acids with (XXXVI.) sodium methoxide, (XXXVII.) sodium ethoxide, and (XXXVIII.) sodium propoxide and isopropoxide, A., i, 669.

formation of chains. Ethylic salts of a-bromo-fatty acids with (XXXIX.) sodium butoxides, (XL.) sodium isoamyloxide, octyloxide, and isocapryloxide, and (XLI.) sodium derivatives of saturated monhydric alcohols, A.,

i, 670.

Bischoff, Carl Adam [with Carl Bernhard, Brodsky, Grünberg, and Taraschtschansky], formation of chains. XXXI. Dimethylaniline and ethereal salts of a-bromo-acids, A., i, 201. Bischoff, Carl Adam [with Hirschfeld,

Päpke, Tschunkew, and Watschjanz], formation of chains. XXXIII. Aromatic monacid bases and the bromides of abromo-fatty acids, A., i, 277.

Bischoff, Carl Adam [with Holm, Kuszell, Maisel, Pakis, and Stefanowski], formation of chains.

Piperidine, A., i, 229.

Bischoff, Carl Adam [with Hurewitsch, Kaiserstein, Karukowski, Sobolewski and Waldmann], formation of chains. XXX. Carbazole, A., i, 231. Bischoff, Carl Adam [with Päpke, Schatz,

and Tschunkew], formation of chains, XXXIV. Aromatic diacid bases and the bromides of a-bromo-fatty acids, A., i, 278.

Bischoff, H., and Fritz Foerster, electrolysis of solutions of calcium chloride,

A., ii, 89.

Bistrzycki, Augustin, and D. W. Yssel de Schepper, parahydroxyphenylphthalide and its conversion into derivatives of anthracene, A., i, 151.

Bistrzycki, Augustin, and Hugo Simonis, condensation of mandelonitrile with

phenols, A., i, 153.

- --- synthesis of pyridazone derivatives, A., i, 392.

Bistrzycki, Augustin, and Fritz Ulffers, peracetylation of phenacetin, A., i, 126.

Blaise, Edmond E., synthesis of terebic

acid, A., i, 115, 419.
— chlorides of monethylic salts of dibasic acids, A., i, 331.

- aa-dimethylglutaric acid, A., i, 480. - synthesis of lævulicacid, A., i, 793.

Blaise, Edmond E., and G. Blanc, amidocampholenes, A., i, 820.

Blanc, G., camphor and its derivatives, A., i, 442.

— camphoric acid, A., i, 443.

- constitution of camphoric acid, A., i, 443, 536, 924, 925, 928.

- molecular transformations effected by hydriodic acid at high temperatures,

A., i, 444.

- constitution of isolauronolic acid, A., i, 536, 630, 924.

- isolauronolic acid : constitution of camphoric acid, camphor, and its derivatives, A., i, 924.

Blanc, G. See also Edmond E. Blaise. Blank, Oskar, and Hermann Finkenbeiner, estimation of formaldehyde by the aid of hydrogen peroxide, A., ii,

188, 820. Blank, Rubin, and E. Samson, new method of preparing ethylic dicarbintetracarboxylate [ethylenetetracarb-

oxylate], A., i, 484. Blattner, N., and J. Brasseur, estimation of oxide of iron and alumina in phosphates, A., ii, 128.

- estimation of perchlorate in alkali nitrates, A., ii, 328.

Blau, Fritz, new organo-metallic compounds, A., i, 387.

Bleier, Lcopold, secondary bases derived from ethylenediamine, A., i, 664.

Bleier, Otto, measurement of gases, A., ii, 51.

Bleier, Otto, and Leopold Kohn, determination of vapour density under arbit-

rary pressure, A., ii, 643. Bloch, C. See Alfred Werner. Bloch, M. See Emil Fromm.

Blonay, H. W. de. See William Borel. Blondel, combination of chromic and

titanic acids, A., ii, 369.

— compounds of titanium dioxide with sulphuric acid, A., ii, 556.

Blum, F., functions of the thyroid gland, A., ii, 115.

- halogen metabolism, A., ii, 164. - physiology of the iodine-containing substance of the thyroid gland, A., ii, 779.

Blumenthal, Ferdinand, formation of sugar from albumin, A, i, 465.

Ferdinand, and PaulBlumenthal, Mayer, formation of sugar from albumin, A., i, 465, 968.

Blumer, Esaias. See Robert Gnehm.

Blyth, Alexander Wynter, the estimation of boric acid mainly by physical processes, T., 722, P., 1899, 51; discussion, P., 51.

— the ultra violet absorption spectrum of proteids in relation to tyrosine, T.,

1162; P., 1899, 175.

- the estimation of nitrites and nitrates by means of ferrous chloride; P., 1899, 50; discussion, P., 50.

Bodenbender, Guillermo, cerium in bismutite from Argentina, A., ii, 758.

Bodenstein, Max, gaseous reactions in chemical kinetics. I., A., ii, 548.

- gaseous reactions in chemical kinetics. II. Influence of temperature on the formation and decomposition of hydrogen iodide, A., ii, 637.

- gaseous reactions in chemical kinetics. III. Formation of hydrogen sulphide from its elements, A., ii, 638.

- gaseous reactions in chemical kinetics. IV. Formation and decomposition of hydrogen selenide, A., ii, 639.

- gaseous reactions in chemical kinetics. V. Gradual combination of oxyhydrogen gas, A., ii, 733.

Bodländer, Guido. See Richard Abegg. **Bodroux,** F., action of bromine on 1:4tertiary-butylphenol in presence of aluminium chloride, A., i, 29.

- action of acid solutions of the lead salts of monobasic fatty acids on monochloroor bromo-aromatic hydrocarbons in which the halogen is in the side chain, A., i, 678.

- action of lead acetate in acetic acid solution on benzylidenic chloride and benzotrichloride, A., i, 678.

Bödtker, Eyvind, the sulphur water of

Sandefjord, A., ii, 39.

Boehm, Rudolf, homologous phloro-glucinols from filicic acid and from

aspidin, A., i, 32.

— filicic acid, A., i, 804.

Bömer, A., analysis of fats. IV. Preparation and crystallisation of cholesterol

and phytosterol, A., ii, 191.

analysis of fats. V. Melting points of cholesterol and phytosterol: amount of unsaponifiable matter in fats, A., ii, 192.

- analysis of fats. VI. Detection of cotton-seed oil in lard, A., ii, 259.

Bömer, A. See also Karl Baumann. Boeseken, J., formation of ketones with the aid of aluminium chloride, A., i, 435.

Böttcher, O., estimation of citrate soluble phosphoric acid in bone meals, super-

phosphates, &c., A., ii, 55.

Boggio-Lera, Enrico, boiling points of compounds of the general formula CH_3 (CH_2)_n R, A., i, 843.

Bogojawlensky, A., crystallisation velo-

city, A., ii, 206.

Bogojawlensky, $A_{\cdot,\cdot}$ and Gustav Tammann, influence of pressure on the electrical conductivity of solutions, A., ii, 137.

Bogorodsky, Alexis, hydrates of magnesium chloride, A., ii, 656.

Bohlig, E., estimation of alkalis in

natural waters, A., ii, 810.

Bohm, J., preparation of zinc isopropyl, A., i, 872.

Bohr, Christian, determination of invasion and evasion coefficients in the solution of gases in liquids: carbonic anhydride in water and aqueous salt solutions, A., ii, 641.

Bokorny, Thomas, action of ethereal oils

on fungi, A., ii, 318.

-chemical physiology of ethereal oils, A., ii, 786.

Bolezzi, Giovanni, salicylparaphenetidine and its derivatives, A., i, 358.

Bollemont, E. Grégoire de, oxymethylene derivatives of alkylic cyanacetates, A., i, 736.

- methylic hydroxymethylenecyanacetate and some of its homologues, A., i, 791.

Bolling, Randolph, preser Hübl's reagent, A., ii, 822. preservation

Bolm, Friedrich, estimation of potass-

ium as platinochloride, A., ii, 695.

Bolschakoff, I., hydrates of cobalt iodide and ferric bromide, A., ii, 427.

Boltzmann, Ludwig, and H. Mache, modifications of van der Waals'

equation, A., ii, 635.

Bone, William Arthur, a new method for preparing unsymmetrical dimethyl- and trimethyl-succinic acids, P., 1899, 5.

Bone, William Arthur, and Charles H. G. Sprankling, researches on the alkyl-substituted succinic acids. Part Methods of preparation, T., 839; P., 1899, 181.

- the symmetrical di-isopropylsuccinic acids, P., 1899, 149.

Bonjean, Edmond, analyses of volcanic rocks from the peripheral series of Mont-Dore, A., ii, 500.

---- rock analyses, A., ii, 674.

- estimation of potassium and sodium [in rocks], A., ii, 695.

Bonnefoi, J., combination of lithium chloride with methylamine, A., i, 185.

Bonnefoi, J., ammoniacal lithium chlorides, A., ii, 96.

Bonnema, A. A., detection of dextrin, gelatin, and gum albumin, A., ii, 196. in desiccated

- estimation of fat in milk, A., ii, 822. Thomas George, the parent Bonney, rock of the diamond in South Africa, A., ii, 769.

Bonnier, Gaston [Eugène Marie], production of alpine characters in plants by extreme variations of temperature, A., ii, 686.

-[respiration] of plants rendered alpine artificially A., ii, 686.

Borel, William, and H. W. de Blonay, estimation of tannin in the oak barks of the Canton of Geneva, A., ii, 241.

Bornemann, G., qualitative separation of antimony and tin, A., ii, 615.

- separation of copper from cadmium as oxalate, A., ii, 813.

Bornträger, Arthur, and G. Paris, analyses of pomegranates, A., ii, 447.

Bornträger, Hugo, analyses of silicon, A., ii, 695.

Boscogrande, Stefano di, derivatives of guaiacol, A., i, 427.

Bose, Emil, electromotive force required to decompose electrolytes, A., ii, 348. - theory of diffusion, A., ii, 729.

Bose, Emil. See also Walther Nernst. Bossi, Ugo, phenyldimethylcoumalin, A., i, 521.

Bottazzi, Filippo, properties of nucleo-

proteids, A., i, 839. Bottenfield, P. B. See E. F. Ladd. Bouchard, Charles, cryoscopic examination of urine, A., ii, 314.

— immunity and specificity, A., ii, 781. Bouchardat, Gustave, and J. Lafont, synthetical isoborneols; their identity with the fenchylic alcohols, A., i, 156.

Boudouard, Octave, decomposition of carbonic oxide in presence of metallic oxides, A., ii, 287, 365, 417, 595.

decomposition of carbonic anhydride in presence of carbon, A., ii, 417, 596.

Boudouard. Octave. See also Paul Schützenberger.

Bougault, J., decomposition of iodoform solutions, A., i, 1.

-action of iodine on antipyrine: estimation of antipyrine or of iodine, A., ii, 193.

- estimation of chlorine, bromine, and iodine, A., ii, 803.

Bouilhac, Raoul, researches on the vegetation of certain algæ, A., ii, 238. Bouilhac, Raoul. See also Alexandre

Étard.

Boullanger. E. See E. Kayser.

Bouma, Jacob, estimation of urinary indican, A., ii, 568.
Bourcet, Paul, absinthin, A., i, 538.

- synthesis of glycocine, A., i, 563. detection and colorimetric estimation of traces of iodine in organic matters, A., ii, 516.

Bourcet, Paul, and G. Berlemont, new

compound air pump, A., ii, 413.

Bourcet, Paul. See also P. Genvresse. Bourgeois, Léon, crystallised basic cupric chlorate, A., ii, 157.

- crystallised uranium phosphate, A., ii, 160.

Bourgougnon, A., estimation of sulphur in sulphites, A., ii, 517.

Bourquelot, Émile [Elie], pectins, A., i, 652.

Bourquelot, Emile, and Henri Hérissey, action of soluble ferments on the pectic products of gentian roots, A. i, 93.

---- hydrolysis of the pectin of

gentian root, A., i, 93.

— presence in malt of a soluble ferment acting on pectin, A., i, 93.

presence of a soluble proteoly-

tic ferment in certain fungi, A., i, 313. pectin present in gooseberry, A., i, 653.

 composition and hydrolysis of the albumin of the carob seed (Ceratonia siliqua), A., i, 839, 968.

- cellular membrane of gentian

root, A., i, 840.

- pectin from the fruit of the wild rose, A., i, 967.

 occurrence of tyrosine, leucine, and asparagine in the pod of the broad bean, A., ii, 325.

 estimation of mannose in mixtures of sugars, A., ii, 817.

Boutroux, Leon, products of oxidation of hydroxygluconic acid, A., i, 259.

Bouveault, Louis, 1:2-acetylfurfuran and its occurrence in wood tar, A., i, 120.

— derivatives of guaiacol, A., i, 264. action of ethylic chloroglyoxylate on aromatic hydrocarbons, A., i, 286. - glyoxylic acids and aldehydes derived from phenylic ethers, i, 287,

- phenylglyoxylic acids, A., i, 288. constitution of camphoric acid, A.,

i, 300, 536.

action \mathbf{of} ethyloxalic chloride [ethylic chloroglyoxylate] on ethylic sodiomalonate, A., i, 416.

- hydroxyphenylglyoxylic acids. Synthesis of vanillin, A., i, 437.

Bouveault, Louis, condensation of semicarbazide with 8-diketones, A., i, 456. -separation of the dibasic acids

formed by the oxidation of fats, A., i, 480. -constitution of the campholenic

acids and their derivatives, A., i, 536. - constitution of camphoric acid and camphor, A., i, 536.

- isomeric aldehydes from oil of lemon grass, A., i, 711.

- nature of the isomerism of the two lemonals (citrals), A., i, 767.

- identification and separation of fatty acids by means of tetrachloroquinol, A., i, 790.

Bouyssy, Marius. See Félix Marboutin. Boyd. See Haven-Boyd.

Bradford, John Rose, influence of the kidney on metabolism, A., ii, 310.

Bradley, Walter Parke, hydrogen sulphide generator, A., ii, 413.

Brautigam, W., behaviour of acetanilide in solutions of zinc chloride and hydrogen peroxide, A., i, 754.

Brand, Ph. See Paul Friedländer. Brandt. See Albert Ladenburg.

Brandt, L., source of error in the estimation of nitric nitrogen by Ulsch's method, A., ii, 806.

Brasseur, J. See N. Blattner.

Brauner, Bohuslav, gases of the argonhelium type and the periodic system, A., ii, 360.

Brauns, Reinhard, diopside (salite) as a weathering product in palæopicrite from Medenbach (Nassau), A., ii, 36.

Brearley, Harry, analysis of molybdenum compounds, A., ii, 129, 336. - estimation of manganese by means

of potassium permanganate, A., ii, 334. estimation of tungsten, A., ii, 337.

- iron separations with alkali salts. I., A., ii, 815.

Bréaudat, L., formation of indigo by industrial processes. Diastasic functions of indigo-yielding plants, A., i, 232,

Bredig, Georg, and Fritz Haber, pulverisation of metal cathodes during electrolysis with a constant current, A., ii, 78.

Breinl, Ferdinand, new reactions of sesamé oil, A., ii, 824.
Breitenbach, Paul, internal friction of

gases and its alteration with temperature, A., ii, 403.

Bremer, Gustav Jacob Wilhelm, determination of the specific gravity of pulverulent substances, A., ii, 81.

appparatus for determining the specific gravity of pulverulent substances, A., ii, 271.

Brendler, Wolfgang, and Julius Tafel, chemical activity of organic ammonium salts, A., i, 104. Breteau, F. See Paul Cazeneuve.

Brétignière, L., and Dupont, employment of mangel-wurzel in cattle feeding, A., ii, 608.

Breustedt, G., detection of salicylic and benzoic acids in milk, A., ii, 532.

Bridge, John L., and William Conger Morgan, ethers of toluquinoneoxime and their bearing on the space-isomerism of nitrogen, A., i, 130.

Bridges, Herbert, ash of cardamoms, A, ii, 794.

Briot, A., substance in the blood which prevents the action of rennet on milk, A., ii, 780.

Brissemoret and Joanne, Digitalis ferment, A., ii, 319.

Britton, W. E. See Edward H. Jenkins. Brizard, L, composition of osmiamates, A., ii, 559.

a ruthenium potassium nitrite, A., ii, 664.

Brizzi, N. See Augusto Piccini.

Brjuchonenko, A., identity of the four affinities of sulphur in sulphines, A.,

 influence of elements on the optical activity of the amyl radicle, A., ii, 265. Brochet, André, action of chlorine on

secondary alcohols, A., i, 99.

 action of chlorine on primary alcohols, A., i, 99.

- action of chlorine on tertiary amylic alcohol, A., i, 100.

- action of formaldehyde on menthol and borneol, A., i, 530.

Brodsky. See Carl Adam Bischoff. Bronstein, S. See Edgar Wedekind. See Rudolph Fittig,

Brooke, Arthur. Henry Lloyd Snape.

Brown, Ernest W., cholesterylic salts of birds' blood, A., ii, 311.

Brown, Harold. See Wyntham R. Dunstan.

Brown, Horace T., and James Hills Millar, maltodextrin: its oxidation products and constitution, T., 286; P., 1899, 11; discussion, P., 14.

- attempts to prepare pure starch derivatives through their nitrates, T., 308; P., 1899, 13; discussion, P., 14. - the stable dextrin of starch transformations, and its relations to the maltodextrins and soluble starch, T., 315; P., 1899, 13; discussion, P.,

Brown, Oliver W., distribution of mercuric chloride between toluene and water, A., ii, 83.

Browne, C. A., physical and chemical constants of butter fat, A., ii, 709.

Browning, Philip Embury, and Ernest Howe, detection of sulphides, sulphites, sulphates, and thiosulphates in the presence of each other, A., ii, 124.

Brühl, Julius Wilhelm, physical properties of some camphors and allied substances, A., i, 625.

alkyldiazourethanes (so-called ni-

trosoalkylurethanes, A., i, 871. theory of unsaturated and aromatic compounds, A., i, 873.

- cause of the dissociative power of a solvent, A., ii, 10.

- constitution of hydroxylamime, A., ii, 285.

-- function of the medium in chemical change, A., ii, 735.

Bruger, P. See Richard Jos. Meyer.

Brugnatelli, Luigi, asbestos deposits of Val Malenco, A., ii, 372.

Bruhn, Bruno, constitution and origin of naphthenes, A., i, 422.

Bruhn, Bruno. See also Wilhelm von Miller.

Bruhns, Gustave, Kjeldahl's process for estimating sugar, A., ii, 254.

Bruni, Giuseppe, phenomena of physical equilibrium in mixtures of isomorphous substances, A., ii, 356, 407.

- equilibrium in systems of two and three components with a liquid phase, A., ii, 406.

- cryohydric phenomena in solutions of enantiomorphous isomerides, A., ii, 731.

Bruni, Giuseppe, and R. Carpené, cryoscopic behaviour of the picrates, A.,

Bruni, Giuseppe, and F. Gorni, solid solutions and isomorphous mixtures of saturated and non-saturated open-chain compounds, A., ii, 731.

(Wetzlar), examination Brunner sodium phosphate for sodium carbonate and reaction of sodium phosphate with phenolphthalein, A., ii, 152.

Brunner, Heinrich, homologues of theobromine, A., i, 306.

Brunner, Heinrich, and Heinrich Leins, separation and estimation of caffeine and theobromine, A., ii, 261.

Brush, Charles F., a new gas [etherion], A., ii, 287.

Bruyn, B. de, equilibrium of three component systems forming two liquid phases, A., ii, 591.

Bruyn, Cornelis Adriaan Lobry de, free chitosamine, A., i, 5.

- action of water on acraldehyde dibromide, A., i, 110.

Bruyn, Cornelis Adriaan Lobry de, an ammoniacal derivative of fructose, A.,

- relative strength of acids, A., i, 861.

---- free hydrazine, A., ii, 745.

Bruyn, C. A. Lobry de, and William Alberda van Ekenstein, action of alkali on the sugars. VI. Maltose, lactose, and melibiose, A., i, 661.

- compounds formed by polyhydric alcohols with benzaldehyde, A.,

i, 661.

— free chitosamine, A., i, 732. preparation of formose by means of amorphous lead hydroxide, A., i, 850.

Bruyn, C. A. Lobry de, and Alphonse Steger, comparative study of the three

dinitrobenzenes, A., i, 744.

- influence of water on the velocity of transformation of orthodinitrobenzene by sodium methoxide and ethoxide, A., i, 745.

- --- influence of water on the velocity of ether formation, A., i, 849.

Bruyn, C. A. Lobry de. See also William Alberda van Ekenstein.

Bryant, Edward G., displacement of metals by magnesium, A., ii, 289.

Brylinski, Albert, estimation of indigo: Brandt's method, A., ii, 194.

Buchner, Eduard, A1-cycloheptenecarboxylic acid, A., i, 423.

Buchner, Eduard, and Rudolph Rapp, alcoholic fermentation without yeast cells. VIII., IX., A., ii, 236, 606.

Buchner, Georg, examination of beeswax, A., ii, 133.

Buchner, Hans, and Rudolph Rapp, relation of oxygen to the activity of living

yeast cells, A., ii, 169.
Budde, C. C. L. G., and C. V. Schou, electrolytic method for estimating nitrogen in organic substances, A., ii, 69**3**.

Bülow, Carl, isodiazo-compounds and their compounds with ethylic aceto-

acetate, A., i, 271.

- ethylic (β-aniline-azo)-acetoacetate (ethylic acetylglyoxylate-α-phenylhydrazone; ethylic benzeneazoaceto-

acetate), A., i, 355.

Bülow, Carl, and Ulrich von Reden,
4:4'-diamidodiphenyl-3:3' dicarb-

oxylic acid, A., i, 150.

Bülow, Carl, and Hans Wolfs, new representatives of primary disazo-dyes of the benzene series, A., i, 135.

Buenzod, J. See Carl Graebe.

Bürkle, Emil. See Henrich Goldschmidt. Büsdorf, Hans. See Eugen Bamberger. Büttner, G. See Karl Auwers.

Buisine, A., and P. Buisine, acetone oils, A., i, 475.

--- acetone oil from calcium pyrolignate as a source of methyl propyl ketone, A., i, 476.

of - regeneration denatured alcohol by means of bleaching powder, A., i, 728.

Bullnheimer, Friedrich, and E. Seitz, alkali copper tartrates and Fehling's solution, A., i, 868.

Bumcke, G., and Richard Wolffenstein,

cellulose, A., i, 852.

Burgers, George K. See H. M. Good-

win. See Burkhardt, Adolf. TheodorCurtius.

Burt, Milo C. See Otto Wallach.

Burwell, Arthur W. See Rudolph Fittig.

Busch, Max, metaxylidine, A., i, 496. - diazole group. VIII. Action of

ammonia and aniline on phenylmethylthiodiazoline disulphide, A., i, **9**53.

Busch, Max, and H. von Baur-Breitenfeld, diazole group. VI. Paratolyldiazolonethiol, A., i, 951.

Busch, Max, and J. Becker, diazole group. IX. Phenyldithiocarbazinic and benzoic chloride, acid i, 953.

Busch, Max, and Friedrich Best, diazole group. XI. Orthanisyl- and aand B-naphthyl-dithiocarbazinic acids and their derivatives, A., i, 955.

Busch, Max [and Edmund Lingenbrink], diazole group. X. Diazolines from paratolyldithiocarbazinic acid and its ethereal salts, A., i, 953.

Busch, Max, and Heinrich Müncker, diazole group. VII. Orthotolyland α - and β -naphthyl-diazolonethicls, A., i, 952.

Busch, Max, and Alfred Stern, diazole XII. Phenyldimethylthiogroup.

diazolinethiol, A., i, 956.

- — diazole group. XIII. Formation of diazoles from phenylcarbazinic and phenylthiocarbazinic acids, A., i, 956.

Busch, Max, and W. Stramer, diazole group. III. Phenyldithiodiazolone-

thiol, A., i, 949.

Busch, Max, and Jos. Wolff, diazole group. IV. Action of amines on phenyldithiodiazolone disulphide, A., i, 949.

- diazole group. V. Condensation of phenyldithiodiazolone hydrosulphamine with aldehydes and ketones, A., i, 950.

Busch, Max, and E. Ziegele, diazoles from carbazinic acids, A., i, 825.

Busnikoff. W., absorption of water vapour by compounds and its partition between two similar and two dissimilar substances, A., ii, 360, 409.

Busse, Walter. See Eduard Polenske.

C.

Cabot, Godfrey L., solubility of lime in aqueous solutions of sodium and potassium chloride, A., ii, 25.

Cady, Hamilton P., naphthalene and

aqueous acetone, A., ii, 82.

- constant temperature device, A., ii, 139.

electromotive force between amalgams, A., ii, 394.

- solid solutions, A., ii, 405.

Cahen, E., action of isobutylic bromide on β-naphthylic methylic ether in presence of anhydrous aluminium chloride, A., i, 617.

Cajar, Hermann, orthaldehydophenoxy-

acids, A., i, 146.
Calame, Paul, dissociation of polyvalent

salts, A., ii, 145. Calzolari, F. See Felice Garelli.

Camerer, William, and Friedrich Söldner, analysis of human urine, A., ii, 825. Cameron, Frank Kenneth, benzoate of

acetohydroxamic acid, A., i, 206.

— benzaldoxime, A., ii, 411. Cameron, Frank Kenneth, and H. A. Holly, acetonechloroform, A., i, 323. Camozzi, G. See Antonio Piccinini.

Campanaro, G., action of malic acid on paramidophenetoil, A., i, 349.

Campani, R. See Fausto Sestini.

Campbell, Edward D., and E. C. Champion, electrolytic estimation of tin in tin ores, A., ii, 62.

Campbell, Edward D., and William E. Hartman, influence of silicon on the heat of solution of coke cast irons, A., ii, 29.

Camus, L., agglutination produced by the albuminous gland of Helix pomatia,

A., ii, 779.

Camus, L., and Eugène Gley, coagulating action of the liquid of the external prostate of the hedgehog on the conof vesiculæ seminalis, tents ii, 779.

- substance in the blood which prevents the action of rennet on milk,

A., ii, 780.

- immunity of certain animals to the poisonous action of eel's serum, A., ři, 783.

Carette [Denis] Henri, methyl nonyl ketone, A., i, 860.

Carles, P., estimation of sugar in chocolate, A., ii, 67.

- detection and estimation of lead in tin plate and "tinned" foods, A., ii, 183. - fluorine in the water of Néris-les-Bains, A., ii, 308.

Carlinfanti, E., derivatives of pinacolin,

A., i, 671.

Carnot, Adolphe, and Goutal, carbides of iron and other metals in metallurgical products, A., ii, 293.

- estimation of carbon in iron

products, A., ii, 809.

Carpené, A., detection and estimation of glucose in diabetic urine, A., ii, 66. Carpené, R. See Giuscppe Bruni.

Carpenter, H. C. H., and William Henry Perkin, jun., the action of ethylene dibromide and trimethylene dibromide on the sodium compound of ethylic cyanacetate, T., 921; P., **1898**, 133.

Carpenter, Harold. See Johannes Wislicenus.

See Em. Laurent. Carpiaux.

Carrara, Giacomo, and U. Rossi, energy of some bases of mixed function, A., ii, 358.

Carveth, Hector R., acetaldoxime, A., ii, 81.

- single differences of potential, A., ii, 137.

- study of a three component system, A., ii, 141.

 composition of mixed vapours, A., ii, 467.

Cash, John Theodore, and Wyndham Rowland Dunstan, pharmacology of aconitine, diacetylaconitine, benzaconine, and aconine, A., ii, 42.

Caspari, William Augustus. See Ludwig

Knorr.

Castoro, Nicola, acetanilide and hypochlorites, A., i, 430.

 molecular weights of some inorganic salts, A., ii, 360.

Cathelineau and Jean Hausser, empyreaumatic oil of juniper, A., i, 536, 711.

Cattaneo, Carlo, temperature coefficients of solutions of salts in mixtures of alcohol and ether, A., ii, 355.

Causse, Henri [Eugène], antimonylphenolic compounds, A.. i, 362.

- triacetylmorphine and the oxidation of morphine, A., i, 394.

Cavalier, Jacques, methylic phosphates, A., i, 558.

·velocity of hydrolysis of alkylic phosphates, A., ii, 13.

Cavalier, Jacques, volumetric analysis of a mixture of alkyl phosphates with phosphoric acid, A., ii, 55.

Cavalier, Jacques, and Pouget, glycerophosphoric acid, A., i, 660.

Caven, Robert Martin, and Alfred Hill, metallic phosphates, A., ii, 28.

- estimation of cuprous oxide by

permanganate, A., ii, 59. Cazeneuve, Paul, application of Schiff's reaction to some substituted magentas,

A., i, 296. - transformation of orthotolylic car-

- bonate into a phthalein derivative, A., i, 296. Cazeneuve, Paul, and P. Breteau,
- solanine, A., i, 551.
- decomposing action of water on hæmatins, A., i, 840.
- hæmatin from blood, and the varieties derived from various species of animals, A., ii, 440.
- Cazeneuve, Paul, and Moreau, action of piperidine on carbonates derived from phenols: transformation of aromatic urethanes, A., i, 132.

 aromatic urethanes of conicine, A., i, 133.

- aromatic diurethanes of piper-

azine, A., i, 167. - aromatic urethanes of tetra-

hydroquinoline, A., i, 305.

- action of sulphuric acid on symmetrical aromatic carbamides, A., i, 430.

Cazeneuve, Paul, and Albert Morel, general method for the preparation of mixed carbonates of the fatty and aromatic series, A., i, 29.

- mixed phenylic alkylic car-

bonates, A., i, 29.

Cecchi-Mengarini, Ettore, Italian petroleums, A., i, 841.

- Centnerszwer, M., melting points of mixtures of optical isomerides, A., ii, 725.
- Ceppellini, Italo, detection of elderberry juice in extract of ergot, A., ii, 135.
- Cesaro, Giuseppe, Belgian minerals, A., ii, 433.
- Chabrié, Camille, apparatus for the separation of organic products, A., ii, 362.
- Chalmot, Guillame J. L. de, iron silicides with a high percentage of silicon, A., ii, 488.
- Champion, E. C. See Edward D. Campbell.
- Chancel, Felix, preparation of hydroxy-
- ethylamines, A., i, 411. amount of ash and cellulose present in Posidonia caulini, A., ii, 682.

Chapin, Edward S. See Arthur A. Noyes. Chapman, Alfred Chaston, quantitative separation of isovaleric and acetic acids, A., ii, 704.

Chapman, David Leonard, the allotropic modifications of phosphorus, T., 734;

P., 1899, 102.

- rate of explosion in gases, A., ii, 591.

Chapman, David Leonard, and F. Austin Lidbury, non-existence of the so-called suboxide of phosphorus, T., 973; P., **1899**, 186.

Chapman, Edgar Marsh. See Arthur Lapworth.

Chappelle, Ph. See G. Meillère.

Charabot, Eugène, the so-called inversion of linalool, A., i, 767.

Charabot, Eugène [and in part Ebray], French essence of peppermint, A., i, 441.

Charabot, Eugène, and March, action of silver nitrate on the fatty acids of cotton seed oil, A., ii, 618.

Charabot, Eugène, and Louis Pillet, essential oils of neroli and petit grain, A., i, 620.

 constituents of oil of petit grain, A., i, 711.

Charitschkoff, K., properties of naphthenates and their qualitative distinction from salts of fatty acids, A., i, 423.

Charon, Ernest, electronegative nature of certain unsaturated organic radicles, A., i, 469.

- crotonaldehyde, A., i, 848.

Charrin, Albert, iron in the spleen during pregnancy, A, ii, 773.

Charrin, Albert, and A. Guillemonat, physiology of pregnancy, A., ii, 773.

Charrin, Albert, A. Guillemonat, and Levaditi, action of mineral substances and organic acids on the resistance of the body to disease, A., ii, 781.

Charrin, Albert, and Levaditi, action of the pancreas on the diphtheric toxin, A., ii, 441.

Chassevant, Allyre, precipitation of urea by phosphotungstic acid, A., ii, 390.

Chatanay, Georges, apparatus for pre-venting the backward flow of water during exhaustion with a water pump, A., ii, 646.

Chattaway, Frederick Daniel, the composition of nitrogen iodide, P., 1899,

18; discussion, P., 21.

Chattaway, Frederick D., and Kennedy Joseph Previte Orton, a series of substituted nitrogen chlorides and their relation to the substitution of halogen in anilides and anilines, T., 1046; P., 1899, 152.

Chattaway, Frederick D., and Kennedy Joseph Previte Orton, preparation and properties of nitrogen iodide, P., 1899, 17; discussion, P., 21.

——————————action of light on nitrogen

iodide, P., 1899, 18; discussion,

P., 21.

the action of alkali hydroxides, of water, and of hydrogen peroxide on nitrogen iodide, P., 1899, 18; discussion, P., 21.

20; discussion, P., 21. recovery of iodine from waste

products, A., ii, 650.

Chattaway, Frederick D., and Henry Potter Stevens, action of reducing agents on nitrogen iodide, P., 1899, 17; discussion, P., 21.

the action of acids on nitrogen iodide, P., 1899, 19; discussion,

P., 21.

Chavastelon, R., compound of acetylene with cuprous oxychloride, A., i, 22.

Cherry, Thomas. See Charles James Martin.

Chesneau, Gabriel, action of nitric oxide on chromous salts, A., ii, 661.

Chiari, K., γ-amino - αβ - propylenic glycol, A., i, 325.

Chibret, Paul, detection and estimation of proteids, diastases, alkaloids, leucomaines, and toxins, especially in urine, A., ii, 459.

Chism, K. E., modification of Eschka's mercury assay, A., ii, 813.

Chittenden, A. S., solution of mercury

in the body juices, A., ii, 311.

Chittenden, Russell H., and Alice H.

Albro, formation of melanin-like pigments from proteids, A., i, 468.

Chittenden, Fussell H., Lafayette B. Mendel, and Yandell Henderson, physiological action of certain derivatives of proteids, A., ii, 233.

tives of proteids, A., ii, 233.

Chittenden, Russell H., and Arthur B.

Siviter, inulin in the gastro-intestinal

tract, A., ii, 310.

Chlopin, Grigori V., estimation of oxygen in gaseous mixtures by titration, A., ii, 574.

Chrétien, Paul, action of acids on iodic acid and iodates, A., ii, 362.

Christomanos, Anastasios, detection of quinine in urine by means of picric acid, A., ii, 344.

Chuard, Ernest, action of water on calcium carbide, A., ii, 155.

Churchill, Jesse Briggs. See Theodore W. Richards.

Ciamician, Giacomo Luigi, and Paul G. Silber, crystalline constituents of galanga root, A., i, 537.

Cieslar, Adolf, amount of lignin in the wood of trees with acicular leaves, A.,

ii, 447.

Cimmino, Raffaele, the diphenylamine test for nitric acid in natural waters, A., ii, 805.

Cioci, A., double thiocyanates of vanadium and the alkalis, A., i, 321.

Claffin, Alan A., manufacture and applications of lactic acid, A., i, 12.

Claisen, Ludwig, condensing action of potassium cyanide on aldehydes and on mixtures of aldehydes and ketones, A., i, 667.

Clark, J. F., electrolytic dissociation

and toxic effect, A., ii, 627.

Clarke, Frank Wigglesworth, alkaline reaction of some natural silicates, A., ii, 109.

--- constitution of tourmaline, A., ii, 767.

Clarke, Frank W., and Nelson H. Darton, hydromica from New Jersey, A., ii, 496.

Clarke, Frank W. See also William F. Hillebrand.

Clarke, Thomas. See Richard Anschütz. Claude, Georges, explosibility of acetylene at low temperatures, A., i, 397.

Cleghorn, Allen, action of animal extracts, bacterial cultures and culture filtrates on mammalian heart muscle, A., ii, 310.

--- physiological action of extracts of sympathetic ganglia, A., ii, 569.

Clemm, Hans. See Emil Fischer.
Clough, Charles Thomas, and William
Pollard, spinel and forsterite from the
Glenelg limestone (Inverness-shire),
A. ii 667.

A., ii, 667.
Clowes, Frank, deposition of barium sulphate as a cementing material of sandstone, A., ii, 761.

Cobbett, Louis, nature of the action of

antitoxins, A., ii, 680.

Cobleigh, W. M. See Frank W.

Traphagen.

Coburn, D. L. See Erastus Hopkins.

Cochenhausen, E. von, oxidation of ketones, A., i, 251.

Cochran, C. B., butter and its adulterations, A., ii, 709.

Cockburn, George Bertram, isomeric fencholenic acids, T., 501; P., 1899,

106. Coehn, Alfred, electrolytic separation of

cobalt and nickel, A., ii, 127.

Cohen, Emil Wilhelm, meteoric iron from Beaconsfield, A., ii, 113.

Cohen, Emil Wilhelm, meteoric iron from San Cristobal, Chili, A., ii 113.

meteoric irons, A., ii, 307, 674.

Cohen, Ernst, velocity of inversion in aqueous alcohol, A., ii, 275.

- internal resistance of normal cells,

A., ii, 462.

Cohen, Julius Berend, and Henry D. Dakin, the aluminium-mercury couple. Part II. Action of bromine on organic compounds in presence of the couple, T., 893; P., 1899, 183.

Cohen, Julius Berend, and Frederick William Skirrow, the aluminium-mercury coulde. Part I. Action of sulphur chloride on some hydrocarbons in presence of the couple, T., 887; P., 1899, 183.

Cohn, Georg, acetylleucomethylene-blue,

A., i, 809.

- orthamidophenetidine, A., i, 944. Cohn, Paul, two new hydrocarbons, A., i, 295.

Cohn, Rudolf, decomposition of albumin by hydrochloric acid. II., A., i, 315. - formation of sugar from proteid, A., ii, 776.

Cole, Grenville A. J., flame reaction of potassium in silicates, A., ii, 521.

Coles. See Cowper-Coles.

Collet, A., action of chloracetic chloride on various aromatic hydrocarbons in presence of aluminium chloride, A., i, 55.

aromatic ketones containing iodine,

A., i, 434.

action of parachloro- and para-bromo-phenyl bromomethyl ketones on aniline, A., i, 698.

- parabromophenyl methyl ketone,

A., i, 699.

- parachlorophenyl methyl ketone, A., i, 699.

llie, John Norman, and Thomas Tickle, the salts of dimethylpyrone Collie, and the quadrivalence of oxygen, T., 710; P., 1899, 148.

Colman, James. See Siegmund Gabriel.
Colson, Albert, methods of synthesis derived from the study of cyanals (aldehyde cyanhydrins), A., i, 251.

— reaction zones, A., ii, 205.

- displacement of metals by hydrogen, A., ii, 215.

- displacement of mercury by hydrogen, A., ii, 485.

- copper reduced at a low temperature, A., ii, 597.

Comanducci, E. See C. Manuelli. Combe, A. See William Oechsner de Coninck.

See Henri Imbert. Compan, P.

VOL. LXXVI. 11.

Conen, Fr., α - and β -trimethylphosphortolubetaines, and their carboxylic acids, A., i, 208.

Coninck. See Oechsner de Coninck.

Conrad, Max, formation of olefine-dicarboxylic acids from ethylic dibromomonalkylacetoacetates, A., i, 481.

Conrad, Max, and Richard Gast, constitution of tetric acid and of the lactone of y-hydroxydimethylacetoacetic acid, A., i, 114.

 derivatives of ethylic diethylacetoacetate, A., i, 193.

 methylic paracyanodimethylacetoacetate, A., i, 258.

Conrad, Max, and Karl Hock, 4:4dimethyl-3-keto-5-pyrrolidone and its derivatives, A., i, 632.

- action of orthophenylenediamine on ethylic bromodimethylaceto-

acetate, A., i, 642.

Conroy, James Terence, composition and solubility of sodium ferroevanide, A.,

Conroy, Sir John, refractive indices and densities of normal and semi-normal aqueous solutions of hydrogen chloride and the chlorides of the alkalis, A., ii, 717.

Conzetti, Alfred. See Richard E. Meyer.

Cook, A. D., method of preparing a strictly neutral ammonium citrate solution, A., ii, 55.

Copaux, H., alkylic borates: properties of ethylic borate, A., i, 183.

 non-existence of monethylic borate [metaborate], A., i, 847.

 volumetric estimation of boric acid, A., ii, 181.

Coppet, Louis Casimir de, freezing point of mixtures of acetic acid and water, A., ii, 546.

- temperatures of maximum density of aqueous solutions of alkali chlorides. A., ii, 590.

Cottle, George J. See Arthur Amos Noyes.

Cotton, S., action of hydrogen peroxide on urine: origin of acetone, A., ii, 780.

Cottrell, F. G., heat of solution of liquid

hydriodic acid, A., ii, 401.

Cottrell, F. G., and Roy Ravone Rogers, action of liquid hydrogen iodide on ether, A., i, 324.

Coupin, Henri, poisonous effects of cupric

salts on higher plants, A., ii, 118.

toxicity of chromium compounds with respect to the higher plants, A., ii, 242.

Coupin, Henri. See also E. C. Teodoresco.

Cousin, H_{\cdot} , halogen derivatives of guaiacol and veratrole, A., i, 200.

- derivatives of catechol, A., i, 346. Cowper-Coles, Sherard, electro-deposition of vanadium, A., ii, 755.

- electro-deposition of palladium, A., ii, 755.

Cramer, Gustav, y-lactones of phenolic acids, A., i, 153.

Crampton, Charles Albert, and F. D. Simons, detection of caramel in spirits and vinegar, A., ii, 530.

Cremer, Max, chemico-physiological studies on phloridzin [diabetes], A., ii, 169.

– formation of glycogen in yeast extract, A., ii, 606.

- formation of fat from proteid in the cat, A., ii, 775.

Cristaldi. See Grassi-Cristaldi.

Crofts, James Murray. See Robert Selby Morrell.

Crookes, Sir William, position of helium, argon, and krypton in the scheme of elements, A., ii, 552.

- photographic researches on phosphorescent spectra: victorium, a new element associated with yttrium, A., ii, 751.

Cross, Charles Frederick, Edward John Bevan, and Thv. Heiberg, oxidation of furfuraldehyde by hydrogen peroxide, T., 747; P., 1899, 130; discussion, P., 131.

Crossley, Arthur William, some derivatives of dimethyldihydroresorcinol, T., 771; P., 1898, 247.

- the interaction of ethylic sodiomalonate and mesityl oxide, P., 1898, 247, and 1899, 52.

- the interaction of ethylic malonate and acetylene tetrabromide in presence of sodium ethoxide, P., 1898, 248.

Crossley, Arthur W., and Henry Rondel Le Sueur, determination of the constitution of fatty acids. Part I., T., 161; P., **1898**, 218.

- chemical and physical characters of some Indian edible oils, A., ii, 324.

Arthur W. See also Henry Crossley, Rondel Le Sueur.

Cumenge, E. See Charles Friedel.

Cuneo, Gerolamo, tetracetylhydrazide and derivatives of urazole, A., i, 9.

- phenylimidotriazoline, A., i, 547. new triazoline compounds, i, 548.

Cunnington, Alfred Valentine. See Siegfried Ruhemann.

Curtis, Chester R., analysis of aqueous alcohol, A., ii, 184.

Curtius, Theodor, diazoacetonitrile, A.

Curtius, Theodor, and Adolf Burkhardt. phenylsemicarbazide, A., i, 137. Curtius, Theodor, and Ferdinand Loren-

zen, hydrazides and azides of aromatic sulphonic acids, A., i, 148. Curtius, Theodor, and Ernst Mohr, con-

version of nicotinic acid into β-amido-

pyridine, A., i, 73.

Curtius, Theodor, and Eduard Portner, hydrazides of meta- and para-bromobenzoic acids, A., i, 136.

Curtius, Theodor, and Erwin Quedenfeldt, symmetrical dibenzylhydrazine, A., i, 276.

Curtius, Theodor, and Johannes Rissom. azoimide, A., ii, 90.

Curtius, Theodor, and Ed. Zinkeisen, transformation of fatty ketazines and aldazines into pyrazoline derivatives, A., i, 165.

Cushman, Allerton Seward. See Theo-dore W. Richards.

Czapek, Friedrich, so-called lignin reaction of wood, A., i, 560.

Czepinski, Vincent, alteration of free energy in melted halogen compounds of some heavy metals, A., ii, 267.

Czerny, H. See Karl Auwers.

D.

Daccomo, Girolamo, and Giovanni Malagnini, kosin, A., i, 158.

Dafert, Franz W., and Otto Reitmair, valuation of basic slag, A., ii, 382.

Daïn, G., action of zinc on ethylic bromisobutyrate and furfuraldehyde: synthesis of B-furfuryl-a-dimethylethylenelactic acid, A., i, 421.

- new method of preparing α-methylcinnamic acid from \$-phenyl-a-methylethylenelactic acid, A., i, 435.

- action of zinc on ethylic α-bromopropionate and benzaldehyde: synthesis of \$\beta\$-phenyl-a-methylethylene-lactic acid, A., i, 436.
— action of zinc on ethylic brom-

isovalerate and benzaldehyde, i, 436.

- oxidation of phenylhydroxypivalic acid, A., i, 436.

Dains, Frank B., isocarbamide ethers [imidocarbamates] and other derivatives of carbamide, A., i, 592.

Dakin, Henry D. See Julius Berend Cohen.

Dales, Benton. See Samuel Avery. Daly, Reginald A., a new variety of hornblende, A. ii, 436.

Daniel, A., and Paul Pierron, ratio of the specific heats in some gaseous saturated hydrocarbons, A., ii, 725.

Dannenberg, A. See Andreas Arzruni. Darbon, A., manufacture of nitrite, A., ii, 745.

Darton, Nelson H. See Frank W. Clarke. Dastre, A., and N. Floresco, chlorophyll in the liver of invertebratæ, A., ii, 374.

Dauner, Heinrich. See Conrad Willgerodt.

Davidson, William B., and Arthur [Rudolf] Hantzsch, physico-chemical investigation of diazonium salts, diazonium hydroxide, and normal diazotates, A., ii, 6.

Davies, Herbert E., action of water on zinc and on galvanised iron, A., ii, 555. Davis, D. J. See Louis Kahlenberg.

Davison, John M., platinum and iridium in meteoric iron, A., ii, 308.

Daw, Frederic Weldon, estimation of manganese by means of potassium permanganate, A., ii, 334.

Dawson, Harry Medforth. See Jacobus Henricus van't Hoff, Arthur Smithells. Dawson, Maria, nitragin and the nodules of leguminous plants, A., ii,785.

Day, William C., laboratory production of asphalts from animal and vegetable materials, A., ii, 559.

Dean, George, determination of the equivalent of cyanogen, P., 1898, 174; discussion, P., 174.

Debierne, A., racemisation of camphor, A., i, 625.

See also G. Urbain. Debierne, A. **Debus**, *Heinrich*, origin of Dalton's atomic theory, A., ii, 645.

Dederichs, W., separation of copper and zinc, A., ii, 812.

Defacqz, Ed., tungsten tetriodide, A., ii, 159.

– tungsten disulphide, A., ii, 428.

--- tungsten pentabromide, A., ii, 489. tungsten chlorobromides, ii, 754.

Dehérain, Pierre Paul, cultivation of wheat and oats at Grignon in 1898, A., ii, 243.

- causes and importance of the destruction of nitrates in soil, A., ii, 511. --- conservation of the nitrogen of farmyard manure, A., ii, 513.

- dissemination of ferments in the

soil A., ii, 609.

 cultivation of potatoes and mangolds at Grignon, A., ii, 687.

Dehérain, Pierre Paul, and Dupont, losses of the nitrogen [of farmyard manure] in the free state, A., ii, 800. Deichler, Christian, properties and preparation of bismuth tetroxide and bismuthic acid, A., ii, 428.

Delaunay, R., estimation of albumin, A., ii, 536

Delépine, Marcel, amines and amides derived from aldehydes, A., i, 186, 410, 664.

 action of formaldehyde on amarine, A., i, 234.

- action of oxygen on solutions of formaldehyde, A., i, 246.

- ethylideneimine, A., i, 326. ---- chloral-ammonia, A., i, 414.

 chlorination of hydrobenzamide. A., i, 693.

 thermochemistry of formaldehyde, A., ii, 142.

Delépine, Marcel, and Paul Rivals, thermochemistry of salicylaldehyde, parahydroxybenzaldehyde, and salicylhydramide, A., ii, 727

Delépine, Marcel. See also Marcellin Berthelot.

Deligny. See Camille Matignon. Demeler, Karl. See Otto Fischer.

Demjanoff, Nicolaus I., action of nitric anhydride and nitric peroxide on olefines, A., i, 845.

Demoussy, E., absorption of haloid potassium salts by plants, A., ii, 172.

- selective absorption of certain elements by plants, A., ii, 238.

— direct conversion of ammonia in

solution into nitrates, A., ii, 443.

Dengin, E. See Alexander Sabanéeff. Deniges, Georges, combination of carbon compounds with mercuric sulphate, A., i, 22.

compounds of aldehydes with mer-

curic sulphate, A., i, 414.

 detection and estimation of acetone by means of mercuric sulphate, A., ii, 256.

- a delicate test for acetonedicarboxylic acid, A., ii, 454.

- estimation of the acidity of urine, A., ii, 525.

 volumetric estimation of aniline and bromine, A., ii, 826.

 estimation of albumin in urine, A., ii, 828.

Dennhardt, Rudolf, fluidity and electrolytic conductivity of salt solutions and the conductivity of oleic acid and the oleates, A., ii, 351.

Dennis, Louis M., and Cyril G. Hopkins, estimation of carbonic oxide, methane, and hydrogen by combustion, A., ii, 332.

Frankland.Dent, See Johannes Thiele.

Derby, Orville Adelbert, association of argillaceous rocks with quartz veins in Brazil, A., ii, 501.

Dernoncourt, A. See Jean Krutwig. Descomps, A., action of phenylhydrazine on chloranilic acid, A., i, 205.

 action of hydrazines on chloranilic and bromanilic acids, A., i, 690.

Descomps, A. See also Henri Imbert. Devaux, Henri, spontaneous asphyxia and production of alcohol in the deep tissues of woody stems growing under normal conditions, A., ii, 789.

Devin, G. See Paul Jannasch. **Dewar**, James, presidential address, T.,

1167; P., 1899, 77.

- the boiling point of liquid hydrogen as determined by a rhodium-platinum

resistance thermometer, P., 1899, 70. -the comparative colour of the vapour of iodine in gases at atmospheric pressure and in a vacuum, P., 1898, 241; discussion, P., 245.

- solidification of hydrogen, A., ii, 740. - application of liquid hydrogen to the production of high vacua, together with their spectroscopic examination, A., ii, 741.

Dewar, James. See also John Ambrose Fleming.

See Fonzes-Diacon. Diacon.

Diamant, Julius, estimation of potassium, A., ii, 57.

Dickson, and L. Malpeaux, molasses as cattle food, A., ii, 509.

Didier, Paul, action of hydrogen sulphide on silicates, A., ii, 596.

Dieckmann, W., condensation of ethylic oxalate with ethereal salts of the glutaric acid series, A., i, 676.

- condensation of ethylic phthalate with ethylic glutarate, A., i, 914.

Diels, Otto, cyanuric compounds, A., i, 406, 558.

Dienert, fermentation of galactose, A., ii, 442.

- secretion of enzymes, Λ ., ii, 683. Diersche, Max, rocks and graphite from

Ceylon, A., ii, 500. Dieseldorff, Arthur, iodine in copper ores from New South Wales, A., ii, 760.

Dieterich, Karl, examination of beeswax,

A., ii, 133. egg-albumin and yolk of egg, A., ii, 392.

Dieterici, Konrad, vapour pressure of dilute solutions at 0°, A., ii, 403.

- relation between osmotic work and osmotic pressure, A., ii, 547.

Dietz, Rudolf, solubility of salts. II. Solubility of the halogen salts of zinc and cadmium, A., ii, 221.

See also W. Ditten-Dietz, Rudolf. berger, Franz Mylius.

Dietze, F., solubility of iodine and bromine in water, A., ii, 150.

Diller, Joseph Silas, origin of palæotrochis [analysis of rhyolite], A., ii, 499.

Dimroth, Otto, direct introduction of mercury into aromatic compounds, A.,

 action of mercuric salts on aromatic compounds, A., i, 428.

Dimroth, Otto. See also Johannes Thiele.

Ditte, Alfred, properties and applications of aluminium, A., ii, 225, 292, 425,

- action of calcium sulphate on halogen alkali salts, A., ii, 289.

Dittenberger, W., and Rudolf Dietz, electrolytic behaviour of platinic and stannic chlorides, A., ii, 629.

Dittrich, Curt, physico-chemical investigation of the uranyl salts, ii, 629.

Ditz, Hugo, formation and composition of bleaching powder, A., ii, 26.

Divers, Edward, absorption of nitric oxide in gas analysis, T., 82; P., 1898, 221.

-interaction of nitric oxide with silver nitrate, T., 83; P., 1898, 221.

preparation of pure alkali nitrites, T., 85; P., 1898, 222; discussion, P., 222.

- reduction of an alkali nitrate by an alkali metal, T., 87; P., 1898, 222.

- hyponitrites; their properties and their preparation by sodium or potassium, T., 95; P., 1898, 223; discussion, P., 225.

Divers, Edward, and Seihachi Hada, ethyl ammonium selenite and the nonexistence of amidoselcnites (selenos-

amates), T., 537; P., 1899, 101. Divers, Edward, and Tamemasha Haga, preparation of hyponitrite from nitrite, through hydroxyamidosulphonate, T., 77; P., 1898, 220.

Divers, Edward, and Masataka Ogawa, ethylammonium sulphite, T., 533;

P., 1899, 101.

Dixon, Augustus Edward, note on certain benzylthioureas, isomeric tertiary T., 373; P., 1899, 54.

on Lössner's benzoylethyloxysulphocarbamic acid and the formation of

pseudoureas, T., 375; P., 1899, 52.

action of metallic thiocyanates on certain substituted carbamic and oxamic chlorides; and a new method for the production of thiobiurets, T., 388; P., 1899, 62.

Dixon, Harold Baily, on the mode of burning of carbon, T., 630; P., 1899, 118; discussion, P., 119.

Dixon, Harold Baily, and James Dysart Peterkin, the action of nitric oxide on nitrogen peroxide, T., 613; P., 1899, 115; discussion, P., 116.

Dixon, Harold Baily, and Edward John Russell, the combustion of carbon disulphide, T., 600; P., 1899, 114; discussion, P., 115.

Dixon, Walter E., physiological action of the alkaloids derived from Anhalonium Lewinii, A., ii, 681.

Dobbie, James Johnstone, and Alexander Lauder, corydaline. Part VI., T., 670; P., **1899**, 129.

Dobbie, James Johnstone. See also Andrew Gray, Walter Noel Hartley. Doctor. Guido. See Albert Laden-

burg.

Dodge, Norman, and L. C. Gratton, alcohol water and potassium nitrate, A., ii, 408.

Doebner, Oscar [Gustav], citral, A., i, 223.

Döhler, E., separation of zinc from nickel, A., ii, 811.

Dörner, Friedrich, cement from anancient water conduit, A., ii, 554.

Donath, Eduard, and B. M. Margosches, estimation of ferrocyanides in spent gas purifying materials, A., ii, 527.

Donnan, Frederick George, isothermal pressure-surface for two single salts and one double salt, A., ii, 402.

Dootson, Frederick W., some halogen derivatives of acetonedicarboxylic Part I., T., 169; P., 1899, acid.

Dootson, Frederick William. See William James Sell.

Dorp, Willem Arne van. See Sebastiaan Hoogewerff.

Dowzard, Edwin, detection and determination of sucrose in the presence of lactose, T., 371; P., 1899, 9.

- acoustical method for the determination of the melting point of fats and waxes, A., ii, 725.

Doyon, M. See Louis Hugounenq.

Dragendorff, Kurt. See RichardStoermer.

Dralle, Eduard. See Johannes Thiele. Drawert. Alexander, quinazoline derivatives, A., i, 642.

Dreser, Heinrich, [physiological action of] aspirin (acetylsalicylic acid), A., ii, 605.

Dreyer, George P., the suprarenal capsules, A., ii, 231.

Driessen-Mareeuw, W. P. H. van den, hyoscyamine from Datura fastuosa, A., i, 829.

Drost, P., nitro-derivatives of orthodinitrosobenzene, A., i, 751.

Droste-Huelshoff, Albert (Freiherr) von. See Wilhelm Marckwald.

Dubigadoux and Durieu, occurrence of strophanthin in the Algerian oleander, A., ii, 325.

Duboin, André, iodine in the mineral waters of Royat, A., ii, 602.

Duboin, André, and Armand Gautier, reducing properties of boron and silicon, A., ii, 652.

Dubosc, A., detection of α -naphthol in β-naphthol, A., ii, 192.

Dubourg, Elisée, fermentation of saccharides, A., ii, 376.

Duchemin, R., separation of methyl ethyl ketone from ethylic alcohol, A., i, 666.

- acetone oils, A., i, 859.

Ducommun, J., a reaction of the arsenictin group, A., ii, 338.

Ducru, O., estimation of arsenic in antimony and in metals, A., ii, 124.

Duden, Paul, and W. Pritzkow, deriof amidocamphor, vatives i, 626.

- synthetical bases of the series of terpenes and camphors, i, 779.

Dübowsky, B., action of methylic chloride, bromide, and iodide on ammonia, A., i, 855.

Dühring, Ulrich,vapour pressure measurements, A., ii, 726.

Düring, Franz. See Frédéric Reverdin. **Dufau**, Em., crystalline double oxides obtained at high temperatures, A., ii, 225.

Dufau, Em. See also Gustave Patein. Duhem, Pierre, general problem of chemical statics, A., ii, 85.

_____false equilibrium, A., ii, 739. Dunin-Wasowicz, von, and J. Horowitz, mineral water from the Stanislawa

spring, Galicia, A., ii, 772. **Dunlap**, Frederick L, action of thiocarbanilide on acid anhydrides, A., i, 697.

Dunlop, James Crauford. See Diarmid Noël-Paton.

Dunnington, Francis P., $\mathbf{a}\mathbf{n}\mathbf{d}$ Hoggard, thermal effects of \mathbf{the} dilution of certain salts, A., ii, 728.

Dunstan, Wyndham Rowland, Harold Brown, occurrence of hyoscyamine in the Hyoscyamus muticus of India, T., 72; P., 1898, 241; discussion, P., 241.

Dunstan, Wyndham Rowland, and Ernest Goulding, the action of alkyl haloids on hydroxylamine; formation of substituted hydroxylamines and oxamines, T., 792; P., 1899, 58 and 124; discussion, P., 60.

- the action of hydrogen peroxide on secondary and tertiary aliphatic amines; formation of alkylated hydroxylamines and oxamines, T.,

1004; P., 1899, 124.

Dunstan, Wyndham Rowland and Thomas Anderson Henry, occurrence of orthohydroxyacetophenone in the volatile oil of Chione glabra, T., 66; P., 1898, 220; discussion, P., 220.

Dunstan, Wyndham Rowland. See also John Theodore Cash.

Duparc, Louis, and E. Ritter, eruptive rocks of Cape Blanc in Algeria, A., ii, 601.

Dupont. See L. Bretignière, Pierre $ar{P}aul$ Dehérain.

Dupont, François, yellow light for the polarimeter, A., ii, 77.

Dupont, Justin, and Jacques Guerlain, oil of basil, A., i, 440.

Durand, Augustin, a lower homologue of citric acid, A., i, 741.

Duret, Albert. See Friedrich Kehrmann. Durieu. See Dubigadoux.

Dutoit, Paul, and \bar{L} . Friderich, conductivity of electrolytes in organic solvents, A., ii, 350.

Dzierzgowski, S., "crystalline fibrin," A., ii, 777.

E.

Eakins, L. G., mineral analyses, A., ii, 564.

Easterfield, Thomas Hill. See W. H. Mills, Thomas Barlow Wood.

Ebaugh, Clarence, and Edgar F. Smith, action of hypophosphorus acid on molybdic acid, A., ii, 489.

Ebray. See Eugène Charabot.

Eckstein, F., analysis of raw materials containing tartaric acid, A., ii, 70.

See WilliamWilfrid.Edgecombe, Bain.

Edinger, Albert, the molecular weight of digitogenin and its decomposition products, A., i, 377.

Edler. See Georg Liebscher.

Edwards, Arthur M., thinolite, A., ii, 303.

Gaston H. See James Edwards, Locke.

Effront, Jean, solvent power of pepsin, A., i, 832.

- solubility of proteoses and peptones in alcohol, A., i, 835.

 action of oxygen on beer yeast, A., ii, 118.

estimation of albumoses and peptones, A., ii, 716.

Eger. See Ludwig Gattermann.

Eggers, F. See Ludwig Gattermann.

Eggertz, Carl Gustaf, and Lars Frederik Nilson, estimation of potassium in fertilisers, A., ii, 384.

Egoroff, J. See Michael I. Konowaloff. Ehrlich, Paul, and Franz Sachs, condensation of aromatic nitroso-compounds with methylene derivatives, A., i, 883.

Eibner, Alexander, Schiff's bases: diphenamine compounds of aliphatic aldehydes, A., i, 41.

Eichleiter, C. Friedrich, strontianite from Bohemia, A., ii, 371.

Eichleiter, C. Friedrich.
Conrad H. von John. See

Eidmann, W., action of magnesium on nitrogenous compounds, A., i, 317.

Ekroos, H., volumetric method for the estimation of the total alkaloids in " Cortex chinæ succirubr," ii, 74.

- phosphorised oil, A., ii, 180.

Elbs, Karl, and Otto Kopp, electrolytic reduction of aromatic nitro-compounds to azo- and hydrazo-compounds, A., i, 270.

Elbs, Karl, and J. Newmann, acetylene tetrabromide and tribromethylene, A., i, 98.

Elbs, Karl, and B. Schwarz, electrolytic reduction of metanitroparatoluidine, A., i, 270.

Eldridge, George Homans, uintahite (gilsonite) deposits of Utah, A., uintahite ii, 35.

Ellery, E. See Ludwig Gattermann.

Ellinger, Alexander, formation of putrescine (tetramethylenediamine) from ornithine, A., i, 186.

Elliot, J. H., a new proteid reaction, A., ii, 136.

Ellms, Joseph W., lacmoid, phenacetolin and erythrosin as indicators in determinations of the alkalinity of water by Hehner's method, A., ii, 525.

Emeljanoff, M., and Alexius Albitzky, elaidic anhydride, A., i, 864.

Emery, Sidney S., Baumé's hydrometer. American standard, A., ii, 466.

Emich, Friedrich, inflammability of thin layers of explosive gases. II., A., ii, 12.

Emilewicz, T., and Stanislaus von Kostanecki, ethoxy- and methoxypiperonalcoumaranones, A., i, 368.

Emilewicz, T., Stanislaus von Kostanecki and Josef Tambor, synthesis of chrysin, A., i, 911.

Emilewicz, T. See also Stanislaus von

Kostanecki.

Emmerling, Adolf, peat litter: investigation of soil samples from manure heaps, A., ii, 571.

Emmerling, Oskar, action of yeast on glyceraldehyde and dihydroxyacetone,

A., ii, 318.

— the sorbose bacterium, A., ii, 318. - schizomycetic fermentation, A., ii, 569.

Enell, Henrik, solubility of calcium tartrate, A., ii, 706.

Engel, Rodolphe [Charles], cupric hypophosphite and its decomposition by palladium, A., ii, 750.

Engle, Wilber Dwight, action of metallic thiocyanates on aliphatic chlorlydrins, A., i, 3.

Engler, A. See Arthur Hantzsch.

Engler, Carl, and J. Weissberg, the rendering active (Activirung) of oxygen. III. Oxidation of triethylphosphine, A., i, 189.

 rendering active (Activirung) of oxygen. II. The active oxygen of oil of turpentine, A., i, 221.

Ercklentz, H. See Karl Auwers.

Erckmann, L., analysis of wine and vinegar, A., ii, 339.

Erdmann, Ernst, constitution and reactions of "isatoic acid," A., i, 939,

Erdmann, Ernst, and Hugo Erdmann, oil of neroli, A., i, 621.

Erdmann, Hugo, and Paul Köthner, acetylene derivatives, Λ ., i, 21.

Erdmann, Hugo, and Albert E. Menke, new method of preparing cæsium, A., ii, 483.

Erdmann, Hugo. See also Ernst Erdmann

Erlenbach, Edgar. See Rudolf Fittig. Erlenmeyer, Emil, jun., formation of a hydroxylactone by the condensation of benzaldehyde with pyruvic acid, A., i, 601.

- α-amido-acids, A., i, 759.

- the two stereoisomeric diphenylhydroxyethylamine bases, A., i, 760. resolution of isodiphenylhydroxyethylamine into its optically active components, A., i, 882.

Erlenmeyer, Emil, jun., and John T. Halsey, synthesis of tyrosine, A.,

i, 760.

Erlenmeyer, Emil, jun., and Julius Kunlin, formation of phenylacetylphenylalanine from phenylpyruvic

phenylalanine, A., i, 761.

Erlenmeyer, Emil, jun., and A. Moebes, phenylbromolactic stereoisomeric. acids, A., i, 896.

Erlwein, G., and Theodor Weyl, distinction between ozone, nitrous acid, and hydrogen peroxide, A., ii, 179.

Erp. H. van, saline efflorescence on

walls, A., ii, 96.

Etaix, L., and Paul Freundler, active (2-methylmethylbutylenediamine 1:4-diaminobutane), A., i, 245.

Etard, Alexandre [Léon], chlorophyll, A., i, 381.

- chlorophylls and the chlorophylls of ferns, A., ii, 792. Etard, Alexandre [Léon], and Bouilhac,

chlorophyll in a nostoc grown in the dark, A., ii, 46.

Etard, Alexandre [Léon]. See also Henri Moissan.

Euler, Hans, relation between the dissociative power, the dielectric constant, and the molecular condition of liquids, A., ii, 462.

- dissociation equilibrium of strong

electrolytes, A., ii, 724.

Ewers, Erich, colorimetric estimation of iron, A., ii, 252.

-estimation of alkaloids in pomegranate bark, A., ii, 457.

Ewers, Erich. See also Julius Troeger.

F.

Faber, Henry Burnell. See Theodorc W. Richards.

Faber, O. von, and Bernhard Tollens, oxycellulose, A., i, 854.

Faber, W. See Emil Knoevenagel. Fabian, Edmund, behaviour of glucos-

amine hydrochloride in the animal body, A., ii, 503.

Fabris, Guido, estimation of glycerol in

sweet wines, A., ii, 131.

Fabry, Ch., and A. Perot, a source of intense monochromatic light, A., ii, 461.

- theory and application of a new method of interference spectroscopy, A., ii, 540.

Fahrion, Wilhelm, oleic acid, A., i, 862. - saponification value of fish oils, A., ii, 711.

Falières, Élie, volumetric estimation of alkaloids, A., ii, 713.

Falk, O. See Friedrich N. Schulz. Falke, Fr. See Georg Baumert.

Fallot, B., composition of walnut cake, A., ii, 797.

Fanto, E. See August Klages.

Fanto, Richard, orthophenylbenzaldehyde, A., i, 367.

Farner, A. See Alexander Tschirch.
Farnsteiner, K., wine vinegar, A.,
ii, 705.

--- detection and separation of some unsaturated fatty acids, A., ii, 705.

Fassbender, G., and A. Y. Grevillius, action of acetic acid vapour and of dilute acetic acid on plants, A., ii, 794.

Faust, Edwin S., samandarin, A., i, 380.

A., i, 466.

Faust, John Kirk. See George William Sargent.

Favrel, G., action of aromatic tetrazochlorides on methylic and ethylic cyanacetates, A., i, 58.

----- action of the bisdiazochlorides of benzidine, orthotolidine, and orthodianisidine on acetylacetone, A., i, 438.

 action of the bisdiazochlorides of benzidine, orthotolidine, and dianisidine on ethylic and methylic malouates, A., i, 521.

Faworsky, Alexei E. See Zivoin Jocitsch. Faxon, W. A. See George W. Rolfe. Feder, Otto. See Friedrich Kehrmann. Feilitzen, Hjalmar von, experiments with nitragin, A., ii, 684.

Feist, Franz, and Wilhelm Molz, synthesis of some furfuran derivatives, A., i, 675.

Feit, W., volumetric estimation of mercury by alkaline arsenite, A., ii, 523.

Feld, Walther, estimation of hydrogen sulphide, sulphurous acid, and thiosulphuric acid, A., ii, 246.

Feldmann, Felix. See Paul Fritsch.
Feldmann, P. See Julius Troeger.
Feliciani, G. See Giovanni Giorgis.
Fenton, Henry John Horstman, and
Mildred Gostling, bromomethyl furfuraldehyde, T., 423; P., 1899, 57.

Fenton, Henry J. Horstman, and Henry Jackson, the oxidation of polyhydric alcohols in presence of iron, T., 1; P., 1898, 240.

T., 575; P., 1899, 119.

Ferée, Jules, calcium amalgam, A., ii, 155.

Ferrand, Lucien, metallic thiophosphates, A., ii, 747.

Ferreira da Silva, Antonio Joaquim, atomic refraction of metals in their carbonyl compounds and the constitutional formulæ of these derivatives, A., ii, 393.

Ferro, A. A. See Guido Pellizzari. Fertsch, F. K. See Paul Jacobson. Fessel, Franz, iodometric acidimetry, A.,

Fessel, Franz, iodometric acidimetry, A., ii, 802.

Feuerstein. See Ludwig Gattermann. Feuerstein, W., and Stanislaus von Kostanecki, piperonalcoumaranone, A., i, 369.

---- brazilin, A., i, 538.

Fichter, Fritz, and A. Krafft, constitution of the crotonic acids, A., i, 255.

Fichter, Fritz. See also Rudolph Fittig. Field, George Wilton, composition of starfish, A., ii, 690.

Fileti, Michele, and Giacomo Ponzio, conversion of ketones into diketones. II., A., i, 111.

Filippo, Joh. D., laurotetanine, the alkaloid of the bark of Tetranthera citrata, A., i, 312.

Filiti, G., estimation of sulphur in Roumanian petroleum, A., ii, 574.

Findlay, Alexander. See Francis R. Japp.

Finkenbeiner, Hermann. See Oskar Blank.

Fischer, Armin, and F. Schaar-Rosenberg, dyes from 5-amidosalicylic acid, A., i, 283.

Fischer, Armin. See also Paul Friedländer.

Fischer, Emil, hydurinephosphoric acid, A., i, 174.

— purine and its methyl derivatives, A., i, 174.

behaviour of 2-amido-6:8-dioxypurine towards chlorides of phosphorus, A., i, 176.

influence of the formation of salts on the hydrolysis of amides and ethereal salts by alkalis, A., i, 262.

—— resolution of racemic amido-acids into optically active components, A., i, 888.

importance of stereochemistry in physiology, A., ii, 169.

Fischer, Emil, and Friedrich Ach, 1:9dimethyluric acid and 1:7:9-trimethyluric acid, A., i, 392.

Fischer, *Emil*, and *Hans* Clemm, new synthesis of paraxanthine, A., i, 173.

Fischer, Louis A., facilities for standardising chemical apparatus offered by the American and other Governments, A., ii, 592.

Fischer, Otto, action of alcoholic hydrogen chloride on nitrosophenylglycine [nitrosoanilidoacetic acid], A., i, 349. - action of formaldehyde on ortho-

diamines. II., A., i, 353.

 benzimidazolecarboxylic acid, A., i, 641.

Fischer, Otto, and Karl Demeler, action of phosphorus pentachloride on 1alkylpyridones and 1-alkylquinolones, A., i, 635.

Fischer, Otto, and Eduard Hepp, isorosindones, A., i, 78.

- hydroxyrosindones, A., i, 78. - synthesis of indulines, A., i, 79.

Fischer, Otto [with W. Hoerger, R. Jaeger, Paul Klitzsch, and L. Leidel], action of phosphorus pentachloride on 1-alkylpyridones and 1-alkylquinolones, A., i, 633.
Fischer, Richard, and J. A. Anderson,

assay of spirit of nitrous ether, A.,

ii, 617.

 assay of amylic nitrite, A., ii, 618.

Fittig, Rudolph, transformation of unsaturated a-hydroxy-acids into hydroxyfurfurancarboxylic acids, A., i, 191. transformation of unsaturated

acids, A., i, 332.

Fittig, Rudolph, and Arthur Brooke, phenylitaconic acid and its isomerides, A., i, 437.

Fittig, Rudolph, and Arthur Burwell, isopropylitaconic acid and its isomerides, A., i, 336.

Fittig, Rudolph, and Edgar Erlenbach, isobutylaticonic acid, A., i, 338.
Fittig, Rudolph, and Fritz Fichter,

propylitaconic acid and its isomerides, A., i, 336.

Fittig, Rudolph, and Fritz Glaser, ethylitaconic acid and its isomerides, A.,

Fittig, Rudolph, and Harold de Haven-Boyd, methylallyllactic acid and dimethylhydrofurfurancarboxylic acid, A., i, 191.

WilliamFittig, Rudolph, and Hoeffken, hexylitaconic acid and its

isomerides, A., i, 339.

Fittig, Rudolph, and Friedrich Kaehlbrandt, oxidation of isobutylitaconic, isobutylcitraconic, and isobutylmes-aconic acids, A., i, 418.

Fittig, Rudolph, and Arthur Kettner, pyrocinchonic acid and its isomerides,

A., i, 333.

Fittig, Rudolph, and Wilhelm Köhl, oxidation of unsaturated dibasic acids: A., i, 418.

Fittig, Rudolph, and Hermann Krafft, dimethylitaconic (teraconic) acid and its isomerides, A., i, 334.

Fittig, Rudolph, and Charles Ford Langworthy, itaconic, citraconic, and mesaconic acids, A., i, 332.

Fittig, Rudolph, and Nicolaus Petkow, dimethylaticonic acid, A., i, 335.

Fittig, Rudolph, and Carl Schirmacher, isobutylitaconic acid and its isomerides, A., i, 338.

Fittig, Rudolph, and Emil Stuber, transformation of unsaturated acids: hexylaticonic acid, A., i, 417.

Fittig, Rudolph, and Heinrich Thron, isopropylisoparaconic acid, A., i, 337.

Flatau, Julien, essential oils of lemon-grass and citronella, A., i, 711.

Flatau, Julien, and Henri Labbé, acids in essence of geranium, A., i, 65.

 characteristic derivatives of geraniol and citronellol, A., i, 409. -essential oil of Portugal (sweet

orange), A., i, 442. - essential oil of mandarins, A.,

i, 442.

- essential oil of melissa, A.,

i, 535. -menthone from the essence of geranium from Bourbon, A., i, 621.

- -- separation of citral citronellal, A., i, 622.

· sugar of orange peel, A., ii, 445.

Flawitzky, Flavian, optical activity of tannin, A., i, 805.

-a hydrate theory of solution, A., ii, 730.

Fleischer, Franz, digitoflavone, a new substance isolated from Digitalispurpurea, A., i, 631.

Fleissner, Franz. See Eduard Lippmann. Fleming, John Ambrose, and James Dewar, magnetic susceptibility of liquid oxygen, A., ii, 544.

Florence, A., estimation of [dissolved] oxygen in water, A., ii, 179.

Florence, Wilhelm, crystals in blowpipe beads, A., ii, 51. Floresco, N. See A. Dastre.

Flusin, G., osmosis of liquids across a membrane of vulcanised caoutchouc, Λ., ii, 204.

Fock, Andreas, crystallographic relations of optically active substances and their racemic compounds [pinonic acids], A., i, 819.

Foerster, Fritz, electrolytic preparation of perchloric acid and its salts, A., ii, 88.

Foerster, Fritz, and O. Günther, electrolysis of solutions of zinc chloride and the nature of spongy zinc, A., ii, 220. Foerster, Fritz, and F. Jorre, relations of hypochlorites to chlorates, A.,

ii, 278. Foerster, Fritz. See also H. Bischoff. Foerster, Otto, estimation of perchlorate

in Chili saltpetre, A., ii, 57.

 extraction of liquids, A., ii, 121. --- gas washing apparatus, A., ii, 805. - estimation of sugar in fodder con-

taining molasses, A., ii, 818.

- isolation of cholesterol and phytosterol from fats, A., ii, 824.

Foglino, Ernesto, action of alkylic salts of \$\beta\$-ketonic acids on paraphenetidine, A., i, 132.

Fonzes-Diacon, Henri, distinctive reaction for creosote and guaiacol, A., ii, 388.

Foote, H. W. See Samuel L. Penfield. Foote, Warren M., meteoric iron from Tombigbee river, Alabama, U.S.A., A., ii, 771.

Forch, Carl, surface tension of aqueous solutions, A., ii, 640.

Forcrand, Robert de, aldehyde-ammonia, A., i, 109.

---- sodium oxides, A., ii, 95.

thermochemistry of sodium sub-oxide and peroxide, A., ii, 141.

- heat of oxidation of sodium, A., ii, 588.

the oxides of sodium and the chemical function of water compared with that of hydrogen sulphide, A., ii, 589.

Forel, G. See Emilio Noelting. Forster, Martin Onslow, influence of substitution on specific rotation in the bornylamine series, T., 934; P., 1899, 71; discussion, P., 72.

- camphoroxime. Part III. Behaviour of camphoroxime towards potassium hypobromite, T., 1141; P., 1899, 193.

- influence of an unsaturated linking on the optical activity of certain derivatives of bornylamine, T, 1149; P., **1899**, 194.

Fortey, Emily C., action of light and of oxygen on dibenzyl ketone, T., 871 ; P., 1899, 182.

Fortey, Emily C. See also Sydney Young. Fosse, R., action of some copper salts on

B-naphthol, A., i, 529.

- action of methylenic and of ethylenic bromides on \$\beta\$-dinaphthol, A., i, 529.

Fosse, R., constitution of $\beta\beta$ -dinaphthol; derivatives of BB dinaphthol, A., i, 817.

 action of aldehydes and aldehydic chlorides on &B-dinaphthol, A., i, 818.

Foster, Arnott R., and Edgar F. Smith, persulphates of rubidium, cæsium, and thallium, A., ii, 747.

Fournier, H., di-isoamylacetic acid, A.,

Fowler, R. E. See Louis Kahlenberg. Fradiss, N., [estimation of caramel], A., ii, 819.

Fraenkel, A., analysis of alloys containing tin and antimony, A., ii, 524.

Fränkel, Sigmund, products of the digestion of albumin. II. Isolation of the so-called carbohydrate group of egg-albumin, A., i, 396.

Franchimont, Antoine Paul Nicolas,

plumieride, A., i, 933.

Franchimont, Antoine P. N., and Herm. Umbgrove, action of sulphuric acid on aliphatic nitramines and their isomerides, A., i, 106.

Franchimont, Antoine Paul Nicolas. See also Herm. Umbgrove.

Francis, Francis E., some derivatives of dibenzyl ketone, T., 865; P., 1899,

Franck, Léon, formation of metallic sulphides by mechanical influences, A., ii, 28.

- aluminium as a reducing agent, A., ii, 102.

Franck, Michel. See Félix Marboutin. Francke, Arthur, thionyl compounds of substituted paraphenylenediamines, A., i, 46.

Franco, Pasquale, saline sublimation from Vesuvius, A., ii, 600.

François, Maurice, action of water on ammonium and potassium mercuriodides, A., ii, 597.

dissociation of diammoniomercuric iodide, A., ii, 657.

· volumetric estimation of aniline, A., ii, 713.

- action of potassium iodide on mercurous iodide, A., ii, 751.

Franke, Adolf, aliphatic hydrazine derivatives and their products of rearrangement, A., i, 247.

-action of hydrazine hydrate on isobutaldol, A., i, 329.

Leopold Kohn, Franke, Adolf, and condensation products of isobutalde-

hyde, A., i, 10. Franke, E. See See Theodor Pfeiffer.

Frankforter, George Bell, occurrence of copper in the plant world, A., ii 323. Frankforter, George B., and P. M. Glasoe, derivatives of camphoroxime, A., i, 713.

Frankforter, George B., and Frank H. Keller, narcotine and narceine, A.,

Frankforter, George B., and A. D. Mayo, derivatives of camphoroxime, A., i, 713.

Frankland, Sir Edward, valency of boron, A., i, 246.

Frankland, Percy Faraday, some regularities of the rotatory power of homologous series of optically active substances, T., 347; P., 1899, 26.

Frankland, Percy F., and Aston, position isomerism and optical activity. The comparative rotatory powers of methylic and ethylic ditoluoylglycerates, T., 493; P., 1899, 105.

Frankland, Percy F., and Frederick Malcolm Wharton, position isomerism and optical activity: the methylic and ethylic salts of benzoyl- and ortho-, meta-, and para-toluoylmalic acids, T., 337; P., 1899, 25.

Franklin, Arthur I. See James F.

Franklin, Edward C., and C. A. Kraus, molecular elevation in the boiling point of liquid ammonia, A., ii, 202. - liquid ammonia as a solvent, A.,

ii, 208.

 metathetic reactions between certain salts in solution in liquid ammonia, A., ii, 284.

 properties of liquid ammonia, A., ii, 284.

Freer, Paul C., constitution of phenylhydrazones, A., i, 357.

Freer, Paul C., and George O. Higley, action of metals on nitric acid, A., ii, 480.

Frerichs, G., action of alkylsulphinates on chloracetylurethanes and chloracetocarbamides, A., i, 795.

- action of potassium hydrosulphide and thiocyanate on chloracetylurethanes and chloracetocarbamides, A., i, 796.

Frerichs, G., and Heinrich Beckurts, action of aromatic amines on chloracetylurethanes and chloracetocarbamides, A., i, 806.

- action of phenylhydrazine on chloracetocarbamides and chloracetylurethane, A., i, 808.

Fresenius, Heinrich, mineral water from Selters, Nassau, A., ii, 114.

Fresenius, Wilhelm, indirect estimation of extractive matter in alcoholic beverages, A., ii, 253.

Fresenius, Wilhelm, detection of tartaric acid in presence of oxalic acid, A., ii, 257

Fresenius, Wilhelm, and Leo Grünhut, behaviour of Prussian blue with solvents in the presence of fat, A., ii, 262. - - estimation of salicylic acid, A., ii, 580.

Freund, Ernst, simplified test for peptone in urine, A., ii, 195.

Freund, Martin [and Carl Holthof], thebaine, A., i, 307.

Freund, Martin, and Ludwig Mai, copper acetylide, A., i, 657.

Martin, and Heinrich P. Freund, Schwarz, cevadine [veratrine], A., i, 464.

Freundler, Paul, hydrocarbon, C₃H₄, a secondary product of the decomposition of barium pyromucate, A., i, 98.

- decomposition of pyromucates of the alkaline earths, A., i, 120.

Freundler, Paul. See also L. Étaix. Freundlich, J., estimation of citratesoluble phosphoric acid in basic slags, A., ii, 331.

simple method of Freyss, Georges, etherification of phenols and aldehydes by means of an acid radicle, and quick method of acetylating aromatic amines containing a negative group, i, 874.

Freytag, Fr., estimation of perchlorate in saltpetre, A., ii, 179.

Friderich, L. See Paul Dutoit, Philippe A. Guye.

Friedel, *Charles*, hydrated sodium silicoaluminate, A., ii, 563.

Charles, and E. Cumenge, carnotite, a new uranium mineral, A., ii, **4**34.

Friedel, Charles, and Alexandre Gorgeu, decomposition of a normal saturated hydrocarbon by aluminium chloride, A., i, 181.

Friedel, Georges, calcium chloraluminate, A., ii, 366.

- sodium silico-aluminate, A., ii, 564.

Friedenthal, A., combination of colloidal with crystalloidal substances, A., i, 852.

Friedenthal, H., molecular weight of soluble starch, A., i, 851.

Friedländer, I., artificial production of diamond in silicates, A., ii, 559.

Friedländer, Paul, preparation of ketocoumaran and analogous compounds, A., i, 675.

Friedländer Paul [and, in part, Ph. Brand], ortho-substituted alkylanilines, A., i, 350.

Friedländer, Paul, and Armin Fischer, isomeric naphthalene derivatives, A., i, 709.

Friedländer, Paul, H. Heilpern, and M. Spielfogel, isomeric naphthalene derivatives, A., i, 708.

Friedland, Leo. See Richard E. Meyer. Friedmann. See Ludwig Gattermann. Friemehlt, P. See Max Scholtz.

Fritsch, Paul, and Felix Feldmann, synthesis of disubstituted acetic acids by means of chloral, A., i, 600.

Fritz, Sigmund. See Ludwig Gattermann.

Fritzmann, E., detection of nitrates in milk by means of formaldehyde, A., ii, 54.

Fröhlich, Alfred, detection of glucose in urine by means of methylene-blue, A., ii, 185.

Fromm, Emil, and M. Bloch, transformation of alkylic dithiocarbamates, NHR CS SR1, into alkylic imidodithiocarbonates, NR: C(SR¹)₂, A., i, 887.

Fromm, Emil, and E. Philippe, dithiobiurets, A., i, 484.

Frühling, R., polarisation of honey, A., ii, 186.

Fuchs, Paul, temperature correction tables for pyknometric measurements, A., ii, 272.

- aræometric valuation of crude sulphur, A., ii, 329.

- correct values of empirically divided hydrometer scales, A., ii, 692.

Furth, Otto von, active physiological substance of the suprarenal capsules, A., ii, 115.

Fulton, Charles H., assay of telluride ores [of gold and silver], A., ii, 63.

Funk, Robert, solubility of salts. III. Solubility of some metallic nitrates, A., ii, 209.

Furnée, A. L. C., trimethylacetonylammonium chloride, A., i, 5.

G.

Gabriel, Siegmund, and James Colman, synthesis of pyridazine and its derivatives, A., i, 390.

pyrimidine [m-diazine], A.,

i, 638.

Gabriel, Siegmund, and Willy Landspseudophthalimidine orthocyanobenzylamine, A., i, 133.

Gabriel, Siegmund, and Ernst Leupold, benzisothiazole, A., i, 85.

- --- derivatives of bromethylamine and bromopropylamines, A., i, 104.

Gabriel, Siegmund, and Ernst Leupold, action of potassium hydrosulphide on orthocyanobenzylic chloride, A., i, 121.

Gabriel, Siegmund, and Theodor A. e-amidocaproic Maas, acid, i, 595.

Gadamer, Johannes, identity of Hesse's Schmidt's i-scopolatroscine with amine, A., i, 91.

Hyoscyamus muticus, A., i, 395. essential oil of Cochlearia officinalis,

A., i, 534. - essential oil of Tropæolum majus, A., i, 535.

- fatty oil of Tropæolum majus, A.,

essential oils and glucosides of cresses, A., i, 930.

estimation of caffeine in tea, coffee, and kola, A., ii, 390.

 testing of oil and spirit of mustard, A., ii, 455, 712.

· preparation and testing of "Spiritus Cochleariæ," A., ii, 456.

Gadd, W. Lawrence, butter analysis, A., ii, 823.

Gaertner, A., vivianite and chalybite in Mecklenburg peat, A., ii, 302.

Gärtner, A. S. See Daniel Vorländer. Gaess, Franz, preparation of a hydroxynaphthaquinonesulphonic acid from naphthol-yellow-S., A., i, 374.

Gallard, F., absorption of iodine by the skin and its localisation in certain organs, A., ii, 503.

Ganzert, Robert. See Ludwig Gattermann.

Garbarini, G., organomercuric compounds of diphenylmethylamine, A., i, 361.

Garelli, Felice, stannic bromide as a

solvent in cryoscopy, A., ii, 271. Garelli, Felice, and F. Calzolari, cryoscopic behaviour of substances with constitutions similar to that of the solvent, A., ii, 731.

Garnier, Léon, volumetric estimation of glucose, A., ii, 701.

Garrigou, F., absence of free iodine and gaseous iodides in the atmosphere of Toulouse, A., ii, 414.

- detection of rare metals in mineral waters, A., ii, 616.

Garrod, Archibald Edward, extraction of homogentisic acid (quinolacetic acid) from urine, A., ii, 314.

Garzarolli-Thurnlackh, Karl, action of pyruvic acid on malonicacid. Synthesis of itaconic seid, A., i, 790.

-action of benzylideneaniline on pyruvic acid and its ethylic salt, A., i, 823.

Garzarolli-Thurnlackh, Karl, action of acid chlorides on benzylidene-aniline, A., i, 881.

formation of 2'-alkylquinoline-4'carboxylic acids, A., i, 940.

Gaspari, Ausonio de. See Giacomo Ponzio. Gast, Richard. See Max Conrad.

Gattermann, Ludwig [and in part F. Bamberg, R. Berendes, K. Beck, Eger, Feuerstein, W. Kreuder, Eugen Oberländer, and Paradeis], replacement of the diazo-group by the sulphinic radicle, A., i, 516.

Gattermann, Ludwig [and in part F. Bamberg, R. Berendes, Robert Ganzert, Carl G. Ochmichen, and G. de Ridder], thiofluorescein and some derivatives of the phthaleins, A., i, 513.

Gattermann, Ludwig, and F. Eggers, synthesis of asarone, A., i, 347.

Gattermann, Ludwig, and E. Ellery, silicomesoxalic acid, A., ii, 418.

Gattermann, Ludwig [and in part Friedmann, Knüttell, von Kuylenstjerna, J. A. Rölofsen, F. Schaar-Rosenberg, Tetzlaff, Tust, and Zimmer, synthesis of aromatic thioanilides, A., i, 694.

Gattermann, Ludwig, Sigmund Fritz, and K. Beck, homologous hydrocarbons of the mesitylene type, A., i, 491.

Gattermann, Ludwig, and Th. von Horlacher, synthesis of hydroxy aldehydes of the naphthalene series, A., i, 372.

Gattermann, Ludwig [and in part Kjellbom, Eugen Oberländer, Prentice, and J. A. Rölofsen], synthesis of aromatic carboxylic acids, A., i, 509.

Gattermann, Ludwig, and M. Köbner, synthesis of hydroxy-aldehydes of the benzene series, A., i, 363.

- synthesis of daphnetin and

æsculetin, A., i, 364. Gauhe, Ernst. See Friedrich Kehrmann. Gautier, [Emile Justin] Armand, presence of free hydrogen in the atmosphere, A., ii, 149.

estimation of carbonic oxide, A., ii, 451.

- iodine in sea water, A., ii, 477, 649. - maximum quantity of chlorides contained in sea air, A., ii, 592.

existence of iodine in the atmosphere, A., ii, 593.

-[presence of iodine in Algæ and Beggiatoa], A., ii, 649.

Gautier, Armand. See also André Duboin. Gautier, Henri, thermal properties of quicklime prepared at different temperatures, A., ii, 399.

- magnesium phosphide, A., ii, 484. Gautrelet, E., egols, new antiseptics, A.,

i, 802.

Gawalowski, A., the most important sweetening materials, A., ii, 254.

- oxygen æolopile, A., ii, 362.

 novelties in laboratory apparatus, A., ii, 515.

Gayaux, detection of cane sugar in milk, A., ii, 254.

Gayon, A., and L. Laborde, estimation of mercury in organic liquids, and especially liquids fermented in presence of mercuric chloride, A., ii, 385.

Gazzolo, F. H. See Charles Loring Jackson.

Geelmuyden, H. Chr., acetonuria in phloridzin poisoning, A., ii, 235.

See Prinsen-Geerligs.

Geese, W. See Rudolph Nietzki.

Geisenheimer, Richard Hans, and Anschütz, action of carbamide on ethylic dioxysuccinate, A., i, 574.

Geisler, Joseph F., paraffin as an adulterant of oleomargarine, A., ii, 710.

Genvresse, P., an isomeride of diphenylene disulphide, A., i, 147.

— phenylphosphoric and phenylene-phosphoric acids, A., i, 342. Genvresse, P., and Paul Bourcet, com-

bination of phenylhydrazine with alkylic iodides, A. i, 501.

Georgiades, Nicolas, chemical examination of laben, A., i, 835.

- resin of Convolvulus althwoides, A., i, 929.

Georgievics, Georg von, condensation of succinic anhydride and pyrogallol, A., i, 803.

Gérard, Ernest. See E. Abelous.

Geret, L., and Martin Hahn, proteolytic enzyme of yeast extract, A., i, 94.

Gerland, B. William, indigotinsubsulphonic acids, A., i, 717.

- indigotin and nitrobenzene, A., ii, 74.

- use of hyposulphite for titration, especially for the estimation of oxygen in water and sewage effluents, A., ii, 697.

Gernez, Désiré, vapours emitted by the two varieties of mercuric iodide, A., ii, 597.

Gerngross, Ludwig. See Wilhelm von Miller.

See Emil Knoevenagel.

Gigli, Guido, action of carbonic anhydride on potassium ferrocyanide, A., ii, 387. Gigli, L., chloralacetone, A., i, 12.

Gigli, Torquato, test for uric acid and its volumetric estimation, A., ii, 71.

Gilbody, AlexanderWilliam, William Henry Perkin, jun., brazilin and hæmatoxylin, P., 1899, 27, 75.

Gill, Augustus H., and Israel Hatch, jun., the heat of bromination test for oils, A., ii, 533.

Gill, Augustus H., and Augustus C. Lamb, constants of American linseed oil, A., ii, 533.

Gill, David, presence of oxygen in the atmospheres of certain fixed stars, A., ii, 718.

Gillespie, H. N. See Claude F. Walker. Ginzberg, Alexander, pinol chlorhydrin, A., i, 618.

structure of the chlorhydrins and their derivatives obtained by the action of hypochlorous acid on pinene, A., i, 619.

Ginzberg, Alexander, and E. Wagner, action of hypochlorous acid on pinene, A., i, 618.

Giorgis, Giovanni, volumetric estimation of nickel, A., ii, 452.

Giorgis, Giovanni, and G. Feliciani, technical analysis and softening of water for boilers, A., ii, 453.

Girard, Aimé, and Léon Lindet, progressive development of grape clusters, A., ii, 445.

phlobaphen of the grape, A., ii, 445.

estimation of malic acid in grapes, A., ii, 454.

Giustiniani, Ercole, maleic derivatives of some aromatic amines, A., i, 349.

- employment of ammoniacal manures on calcareous soils, A., ii, 692.

Giustiniani, Ercole. See also R. Vittorio Matteucci.

See Wilhelm Kalmann. Gläser, Moriz. Glaser, Charles, double salts of nicotine hydrochloride and cadmium chloride, A., i, 829.

Glaser, F., indicators for alkalimetry, A., ii, 572.

Glaser, Fritz. See Rudolph Fittig.

Glaser, L., electrolytic decomposition of aqueous solutions, A., ii, 78.

Glasoe, P. M. See George B. Frankforter. Glendinning, Tom A., the correction for unfermentable reducing substances in sugar analysis, A., ii, 187. Gley, Eugène. See L. Camus. Gley, Richard. See Carl D. Harries.

Glinka, Konstantin D., origin, composition, and alteration of glauconite, A., ii, 112.

- analcite from Baku, Caucasus, A., ii, 672.

Gloss, Samuel D., molecular weight of sulphur, A., ii, 415.

Gnehm, Robert, and Esaias Blumer, alkyl derivatives of orthotoluidine, A., i, 265,

Gnezda, Julius, reactions of indole bases and proteids, A., ii, 715.

Godlewsky, J., structure of terpenes and allied compounds. XXII. Lævoterpene hydrate, A., i, 920.

-structure of terpenes and allied XXV. compounds. Structure

limonene, A., i, 920.

Godlewsky, J., and K. Roshanowitsch, structure of terpenes and allied com-XXIV. Limonene pounds. limonene bromide, A., i, 920.
Godlewsky, J., and Georg Wagner,

structure of terpenes and allied compounds, the terpene from solid pinene

dibromide, A., i, 618. Goecke, W. See Emil Knoevenagel.

Göckel, Heinrich, siphon arrangement for reduction flasks, A., ii, 614. Goehlich, Wilhelm. See Ernst Schmidt.

Göttig, Christian, absorption of hydrogen phosphide in presence of alkali chlorides, and the purification of crude acetylene, A., i, 657.

Goldberg, Alwin, estimation of carbon

disulphide, A., ii, 333.

Goldberger, Anton von. See Eugen Bamberger.

Golding, John, sugar as an agent in nitrogen fixation and an aid to the growth of plants, A., ii, 689.

Goldschmidt, Heinrich, and EmilBürkle, dynamical researches on the formation of azo-compounds. III., A., ii, 276.

Goldschmidt, Heinrich, and Richard M. Salcher, aminolysis, A., ii, 551.

Goldschmidt, R., and Albert Reychler, electric conductivity of salt solutions, A., ii, 463.

Goldschmiedt, Guido, papaverine, A., i, 86. tetrahydro-

Goldschmiedt, Guido, and Gustav Knöpfer, condensations with phenylacetone [benzyl methyl ketone], A., i, 140. Goldsmith, J. See Emil Knoevenagel.

Goldsmith, Léo. See Charles F. Mabery. Gomberg, Moses, a periodide of triphenylmethane, A., i, 155.

- tetraphenylmethane, A., i, 155. Gonnermann, Max, darkening of sugar beet juice, A., ii, 790.

production of sugar in beets, A.,

ii, 791. Gonswa, \underline{J} . See Edgar Wedekind.

Gooch, Frank Austin, and Martha Austin, estimation of manganese as pyrophosphate, A., ii, 128.

- composition of ammonium magnesium phosphate, A., ii, 451.

Gooch, Frank A., and Louis C. Jones, estimation of boric acid, A., ii, 331.

Goodwin, H. M., and George K. Burgers, osmotic pressure in ethereal solutions, A., ii, 273.

Goppelsroeder, Friedrich, employment of adsorption in analytical separations,

A., ii, 572.

Gordin, Harry Mann, and Albert B. Prescott, emetine octiodide: extraction and estimation of alkaloids, A.,

- a new method for the estimation of morphine in opium, A., ii, 714. - hydrastine pentiodide hydriodide: volumetric estimation hydrastine and berberine in the root of Hydrastis canadiensis, A., ii, 826.

Gordin, Harry Mann. See also Albert

B. Prescott.

Clarence McCheyne, contact potential between metals and melted salts and the dissociation of melted salts, A., ii, 347.

Gordon, Clarence McC. See also Theodore W. Richards.

Gorgeu, Alexandre. See Charles Friedel. Gorni, F. See Giuseppe Bruni.

Goske, Adolf, a new asbestos filtering tube, A., ii, 16.

Goss, Arthur, and Harry Snyder, [analysis of Rothamstead soils], A., ii, 688. Gostling, Mildred. See Henry J. Horst-

man Fenton. Gotthelf, A. H. See J. Livingston R.

Morgan. ottlieb, Jacob, propiophenoneortho-carboxylic acid and benzyl-methyl-Gottlieb, ketone-orthocarboxylic acid [orthacetonylbenzoic acid], A., i, 511.

Goulding, Ernest. See Wyndham Rowland Dunstan.

Goutal, E. See Adolphe Carnot.

Grab, Hugo. See Friedrich Kehrmann. Graebe, Carl, benzoin-yellow, A., i, 220.

- imines of benzophenone and the constitution of auramine, A., i, 702.

- hydrogen sulphide as a reagent, A., ii, 178.

Graebe, Carl, and J. Buenzod, aniline of the phthalic acids, salts i, 762.

Graebe, Carl, and F. Keller, orthoderivatives of benzophenonephenylimine, A., i, 703.

Graebe, Carl, and Paul Röder, oxime and phenylhydrazone of xanthone, A., i, 705.

Gräff, Louis, fibrous goslarite from Aachen, A., ii, 303.

Gramont, Arnaud [Comte] de, dissociation spectra of fused chlorides, bromides, and iodides, A., ii, 137.

— spectra of compounds, A., ii, 197.

Gramont, Arnaud (Comte) de, dissociation spectra of fused salts. Alkali metals: sodium, lithium, potassium, A., ii, 198.

spectra of aluminium, tellurium,

and selenium, A., ii, 199.

dissociation spectra of fused sulphates, phosphates, and salts containing both sulphur and phosphorus, A., ii, 345.

Granger, Albert, production of tungstenblue by the reduction of tungsten in porcelain furnaces, A., ii, 32.

metallic phosphides and arsenides,

A., ii, 211.

- metallic phosphides, A., ii, 286. Grashof, Wilhelm, experiments on rape, A., ii, 797.

Grassi-Cristaldi, Giuseppe, and Maselli, chlorinated derivatives of trioxymethylene, A., i, 409.

Giuseppe, \mathbf{and} Grassi-Cristaldi, Motta, constitutional formulæ hexamethylenetetramine, A., i, 473.

Gratton, L. C. See Norman Dodge. Graul, Otto, and Arthur Hantzsch, isomeric salts of ethylnitrolic acid, A., i, 187.

Gray, Andrew, and James J. Dobbie, connection between the electrical properties and chemical composition of different kinds of glass, A., ii, 541.

Gray, Thomas, reduction of nitric oxide by copper with special reference to Dumas' method of estimating nitrogen, A., ii, 248

Grebe, E. See Alfred Werner.

Greene, Charles Wilson, relation of the inorganic salts of the blood to the automatic activity of ventricular muscle, A., ii, 114.

Gregor, Georg. See Richard Přibram. Greig, E. D. W. See Ralph Stockman. Grevillius, A. Y. See G. Fassbender.

Griffin, Martin L., agents for removing lime and magnesia from natural waters for industrial purposes, A., ii, 655.

Griffiths, Arthur Bower, æolosomin, A., ii, 115.

Griffon, Ed., relation between the intensity of the green colour of leaves and their chlorophyllic assimilation, A., ii, 320.

Griggi, Gioachino, delicate test for gallic acid, serving to distinguish it from digallic acid and phloroglucinol, A., ii, 581.

Victor, a new sexavalent con: 2-methyl-3-hexene-5-Grignard, hydrocarbon: ine, A., i, 727.

· 2-methyl-4-heptene-6-ine and 2methyl-4:5:6-heptatriene, A., i, 727. Grignard, Victor. See Philipps Barbier. Grinberg, S. See Fritz Haber.

Gröger, Max, density and molecular weight of ozone, A., ii, 150.

- red potassium copper chloride, A.,

Groll, Friedrich. See Hans Verwer. Gronover, A. See Alfred Partheil.

Groos, A. See Emil Knoevenagel. Grosch, E., orthochlorophenylthiocarb-

imide, A., i, 509.

Gross, Rudolf. See Richard E. Meyer. Grosse, Rudolf. See Paul Jacobson.

Grossmann, J., indigo testing by permanganate, A., ii, 74.

Grothe, W. See Heinrich Beckurts. Grünbaum, O. F. F., administration of suprarenal extract by the mouth in

health and disease, A., ii, 441. Grünberg. See Carl Adam Bischoff. Grünhut, Leo, detection of glycerol, A.,

ii, 253. table for the calculation of analyses of fuming sulphuric acid, A., ii, 381.

Grünhut, Leo. See also WilhelmFresenius.

Grüss, J., oxydases and the guaiacum reaction, A., i, 314.

Grützner, Bruno, compounds of hexamethylenetetramine (urotropine), A.,

- action of mercuric chloride on phenol solutions, aqueous Α., i, 198.

 estimation of oil and spirit of mustard, A., ii, 530.

Gruzewska, S., crystallisation of blood albumin, A., i, 838.

Gucci, Pietro, action of isopropylic iodide on phthalic anhydride in presence of zinc dust: purification of propylphthalide, A., i, 513.

Günther, Fritz, cocaine, A., i, 963.

Günther, O. See Fritz Foerster. Guerbet, M., action of fermentation amylic alcohol on sodium amyloxide, A., i, 471.

-action of alcohols on their sodium derivatives, A., i, 472.

-direct conversion of acetamide into ethylamine by reduction, A., i, 795. - composition of cerebro-spinal fluid,

A., ii, 780. Guérin, Gabriel, detection of albumin in

urine, A., ii, 716. See Justin Dupont. Guerlain, Jacques. Guffroy, Ch., phosphoric acid and cereals,

A., ii, 795. Guglielmo, Giovanni, modifications of

the Geissler pump, A., ii, 474. Guichard, Fr., chlorophosphines of the aliphatic series, A., i, 563.

Guichard, P., composition of the water from wells on the sea-coast, A., ii, 566.

Guillemain, Constantin, composition of natural thio-salts, A., ii, 756.

Guillemonat, A. See Albert Charrin.

Guinchard, J., derivatives of ethylic succinylsuccinate, A., i, 700.

coloured salts of violuric acid and other oximido-ketones, A., i, 779.

Gulewitsch, Wladimir von, neurine and its derivatives, A., i, 106.

- action of trypsin on simple chemical compounds, A., i, 832.

- arginine, A., i, 833.

---- thymine, A., i, 834.

-leucomaines of the brain. ii, 439.

Guntz, Antoine, heat of formation of lithium carbide, A., ii, 24.

- silver suboxide, A., ii, 418.

Gurewitsch, A., action of tertiary butylic chloride on dihydric phenols in presence of ferric chloride, A., i, 880.

Gustavson, Gabriel, trimethylene from trimethylenic bromide, A., i, 421.

Gustavson, Gabriel, and (Miss) O. Popper, 1:1-dimethyltrimethylene, A., i, 263.

Guthzeit, Max, tautomeric forms of ethylic isaconitate and of ethylic dicarboxyglutaconate, A., i, 115.

-ammonium salt of ethylic 2:6dihydroxynicotinate, A., i, 450.

Guthzeit, Max, and Leopold Laska, methylic isaconitate ($\omega_2 \Delta \omega_1$ -propenetricarboxylate), A., i, 260.

Gutmann, August, double sulphates of antimony and the alkali metals, A., ii, 33.

Guye, Philippe A., and A. Babel, specific rotatory power and position

isomerism, A., ii. 718, 719.

Guye, Philippe A., and L. Friderich, measurement of viscosity coefficients, A., ii, 358.

Guyot, Alfred, syntheses by means of phthalyl tetrachloride (m. p. 88°). II. Homologues of diphenylanthrone. A., i, 293.

Guyot, Alfred. See also Albin Haller. Guyot, H., syntheses by means of phthalyl tetrachloride (m. p. 88°). II. Homologues of diphenylanthrone. II., A., i, 294.

Gwillim, J. C., and W. S. Johnson, ores and rocks from British Columbia, A., ii, 498.

H.

Haber, Fritz, electrolytic preparation of phenyl-B-hydroxylamine, A., i, 269.

Haber, Fritz, and S. Grinberg, electrolytic formation of hydrogen peroxide, A., ii, 17.

Haber, Fritz. See also Georg Bredig. Wanda. Haberkant, See Friedrich

Kehrmann.

Haberland, K. R., estimation of acetic acid in commercial acetates and the separation of acetic, propionic, butyric, and formic acids, A., ii, 531.

Hada, Seihachi. See Edward Divers.

Haensel, P. See Ernst Schmidt.

Härtel, Friedr. See Carl Paal.

Haeussermann, Carl, potassiodiphenylamine, A., i, 126.

Haeussermann, Carl, and Eugen Bauer, tertiary aromatic amines. I. and II., A., i, 204, 684.

Häusermann, Emil, iron in blood-plasma and leucocytes, A., ii, 231.

Haga, Tamemasha. See Edward Divers, $Carl\ D.$ Harries. Hahn, $H.\ C.$, specific gravity of sodium

chloride solutions, A., ii, 23.

Hahn, Martin. See L. Geret.

Haig, Alexander, excretion of uric acid, A., ii, 440.

Halbey. See Alexander Tschirch. Halenke, A., Kjeldahl's process for destroying organic matter, applied to the detection of metals in foods, &c., A., ii, 696.

See F. Stanley Kipping. Hall, Miss L. Haller, Albin, combination of camphor

with aldehydes, A., i, 770.

Haller, Albin, and Alfred Guyot, constitution of phthalyl-green, A., i, 155. - syntheses by means of ortho-

phthalyl tetrachloride (m. p. 88°). I. Preparation of diphenylanthrone, A., i, 221.

Haller, Albin, and Paul Th. Muller, molecular refraction and dispersion and specific rotation of compounds of camphor and aromatic aldehydes, A., ii, 622.

Haller, Albin, and Herm. Umbgrove, dialkylbenzoyl- and dialkylbenzyl-

benzoic acids, A., i, 814.

Halliburton, William Dobinson, and Frederick W. Mott, physiological action of choline and neurine, A., ii, 315.

William D. See also Halliburton, Frederick W. Mott.

Halliwell, Edward, periodic analyses of the rivers of the West Riding of Yorkshire, A., ii, 772.

Hallopeau, L. A., action of hydrogen on potassium paratungstate, A., ii, 32. electrolytic production of crystalline tungsten, A., ii, 158.

VOL. LXXVI. ii.

Hallopeau, L. A., crystallised tungsten dioxide and tungstolithium tungstate, A., ii, 159.

· action of metallic sulphates on potassium paratungstate, A., ii, 159.

 a tungsto-potassic tungstate, A., ii, 555.

Hallwachs, Wilhelm, double trough refractometer and experiments therewith on solutions of cadmium bromide, sugar, and di- and tri-chloracetic acids and their potassium salts, A., ii, 461.

Halsey, John T. See Emil Erlenmeyer,

jun.

Hamburg, A. Max, new derivatives of gallic acid, A., i, 364.

Hamburger, Arthur, condensation of phthalaldehydic acid with acetone and acetophenone, A., i, 142.

Hamburger, Hartog Jakob, influence of carbonic anhydride and of alkali respectively on the anti-bacterial properties of blood and similar fluids, A., ii, 603.

Hamburger, Hugo. See Zdenko H. Skraup.

Hamburger, J. See Wilhelm von Miller. Hammarston, Olof, fibrin formation, A., ii, 776.

Hamner, S. G. See James Lewis Howe. Hanamann, Joseph, lysimeter experiments, A., ii, 515.

Hanna, D. C., and Edgar F. Smith, derivatives of aconitic acid, A., i, 577.

Hanriot, Maurice, direct oxidation of fat, A., i, 190.

Hanriot, Maurice, and G. Reynaud, oxazoles, A., i, 723.

Hanschke, Gottfried, quinazolone compounds, A., i, 775.

Hantower, Ludwig, and Ernst Täuber, chromotropic acid, A., i, 63.

Hantzsch, Arthur [Rudolf], determination of the structure of substances with labile atom-groupings, A., i, 399.

- corrections with regard to diazo-

compounds, A., i, 685.

 action of zinc ethyl on the so-called nitramines and isonitramines, A., i, 692.

- structural isomerism in inorganic compounds, A., ii, 207.

· silver disulphide, A., ii, 215. Hantzsch, Arthur, and G. Osswald, cyanoform, A., i, 405.

Hantzsch, Arthur, and A. Rinckenberger, nitroform, A., i, 404.

Hantzsch, Arthur, and M. Schümann, diazotisation, A., ii, 549.

Hantzsch, Arthur, M. Schümann, and antidiazohydrates and A. Engler, primary nitrosamines, A., i, 685.

Hantzsch, Arthur, and A. Veit, isonitrocompounds, A., i, 401.

Hantzsch, Arthur. See also William B. Davidson, Otto Graul.

Hanzlik, Wenzel, and Al. Bianchi, derivatives of paratolualdehyde, A., i., 597.

—— derivative of paratolualdehyde, A., i., 890.

Harcourt, Augustus George Vernon, on a method for providing a current of gaseous chloroform mixed with air in any desired proportions, and on methods for estimating the gaseous chloroform in the mixtures, T., 1060; P. 1899, 188; discussion, P., 190.

Harden, Arthur, action of hydrogen peroxide on formaldehyde, P., 1899,

158; discussion, P., 159.

Harding, M. C., reaction between some salt solutions and an alkaline solution of antimony trioxide, A., ii, 490.

Hardy, W. B., action of the cells of frogs' lymph on bacilli, A., ii, 165.

structure of cell protoplasm, A., ii, 438.

Harlay, V., products of the action of pepsin and pancreatic juice on fibrin, A., i, 656.

--- action of pepsin and pancreatic juice on albumin, A., i, 835.

action of heat on pepsin, A., i, 967.

action of heat on trypsin, A., i, 967.

Harley, Vaughan, the effect of com-

pression of one lung on the respiratory gas exchange, A., ii, 675.

influence of the removal of the large intestine on metabolism in dogs, A.,

ii, 774.

Harnack, Erich, action of hydrogen sulphide on blood pigments, A., i, 467.

Harnack, Erich, and Friedrich Karl Kleine, sulphur in the urine under various conditions, A., ii, 375.

Harpf, August, some properties of liquid sulphurous anhydride, A., ii, 594.

Harries, Carl D., behaviour of mesitylic oxide towards sodium hydrogen sulphite, A., i, 566.

--- reactions of unsaturated ketones, A., i, 578.

Harries, Carl D., and Richard Gley, stereoisomeric mesityloximes, A., i. 566.

Harries, Carl D., and Tamemasa Haga, stereochemistry of nitrogen compounds, A., i, 562. Harries, Carl D., and Friedrich Kaiser, reduction of αβ-unsaturated ketones, A., i, 578.

Harries, Carl D., and Israel Matfus, hydroxylamino-oximes of certain cyclohexenones, A., i, 583.

A., i, 629.

Harries, Carl D., and F. Mayrhofer, hydroxylaminocarvoxime and its conversion into dihydrocarvyldiamine, A., i, 624.

Harrington, Wentworth Lewis. See Theodore W. Richards.

Harris, S. H., a double citrate of zirconium and ammonium, A., i, 262.

Hartleb, R. See Albert Stutzer.

Hartley, Ernald George Justinian, chalcophyllite, A., ii, 433.

Hartley, Ernald G. J. See also Henry Alexander Miers.

Hartley, Walter Noel, on the absorption spectrum and constitution attributed to eyanuric acid, P., 1899, 46.

— chemical changes in oceanic deposits, A., ii, 437.

Hartley, Walter Noel, and James J. Dobbie, a study of the absorption spectra of isatin, carbostyril, and their alkyl derivatives in relation to tautomerism, T. 640: P. 1899. 47: discussion 48.

T., 640; P., 1899, 47; discussion, 48. Hartman, William E. See Edward D. Campbell.

Hartwell, Burt L., and Homer J.
Wheeler, possible error in the estimation of nitrogen in nitrates due to impurities in reduced iron, A., ii, 519.

Hartwell, Burt L. See also Homer J. Wheeler.

Harvey, Alfred William. See William J. Pope.

Hasenbäumer, Julius, primary chlorostibines of the aromatic series, A., i, 209.

Hasterlik, Alfred, detection of "saccharin" in wines, A., ii, 819.

Hata, S. See K. Katsuyama.

Hatch, Israel, jun. See Augustus H. Gill.

Hausmann, Walther, the nitrogen in the proteid molecule, A., i, 653.

Hausser. Jean [Louis]. filtration. A..

Hausser, Jean [Louis], filtration, A., ii, 277.

filtration of organic liquids, A., ii, 277.

laboratory sterilising apparatus, A., ii, 569.

 vacuum regulator for distillations under reduced pressure, A., ii, 645.
 Hausser, Jean. See also Cathelineau. Haven-Boyd, Harold de. See Rudolph Fittig.

Havens, Franke Stuart, separation of nickel from cobalt by hydrogen chloride, A., ii, 127.

Haywood, John K., estimation of calcium and magnesium in ashes, A., ii, 612.

some boiling point curves, A., ii, 632.

Heath, George L., estimation of sulphur in coal, A., ii, 52.

Hébert, Alexandre, formation of proteids in plants by the reduction of nitrates, A., ii, 47.

— presence of hydrocyanic acid in various plants, A., ii, 377.

Hébert, Alexandre, and F. Heim, active principles of certain aroids, A., i, 240.
Hébert, Alexandre, and Georges Reynaud,

an X-ray photometer, A., ii, 586.

specific absorption of X-rays

by metallic salts, A., ii, 586. Hébert, Alexandre, and Georges Truffaut,

degeneration of Cattleya, A., ii, 174. **Heddle**, Matthew Forster, Scottish silicates, A., ii, 497.

Hefelmann, Rudolf, estimation of nicotine in tobacco, A., ii, 261.

Hefelmann, Rudolf, and Ernst Steiner, soan analysis. A., ii. 190.

soap analysis, A., ii, 190. **Hehner**, Otto, and Charles Ainsworth **Mitchell**, chemistry of drying oils, A., ii, 190.

Hehner, Otto, and William Pearson Skertchly, estimation of pentosans and its application to food analysis, A., ii, 702.

Heiberg, Thv. See Charles Frederick Cross.

Heidenreich, Ole N., estimation of sulphur in pyrites in the presence of iron, A., ii, 517.

Heidrich, Karl, action of ethylic acetoacetate on benzidine, A., i, 366.

Heilpern, H. See Paul Friedländer. Heim, F. See Alexandre Hébert.

Heim, Karl, determination of polarisation, A., ii, 77.

Heimann, Wilhelm. See Paul Jannasch. Heinemann, Adolf, analysis of gallotannic acids, A., ii, 455.

Heinz, R., physiological action of iodine and iodine compounds, A., ii, 440.

Heip, F. See Ludwig Wolff.

Hélier, Henri, combination of gases, A., ii, 85.

reducing power of the tissues: liver and pancreas, A., ii, 374.

--- reducing power of tissues: the blood, A., ii, 502.

reducibility of metallic oxides, A., ii, 555.

Hélier, Henri, reducing power of urine, A., ii, 679.

Hellsing, Gustaf, chrysean, A., i, 563. Hempel, Walther, experimentation at low temperatures, A., ii, 139.

— the absorption of nitrogen, A., ii. 594.

Hempel, Walther, and W. Scheffler, estimation of fluorine and carbonic anhydride, and the estimation of fluorine in teeth, A., ii, 380.

Hempel, Walther, and Johannes Seidel, compounds of carbonic anhydride with water, ethylic ether, and alcohols, A., ii, 151.

Hemptinne, Alexander de, catalytic action of platinum black, A., ii, 146.

--- catalytic action of platinum and palladium, A., ii, 228.

Hemptinne, Alexander von, and A. Bekaert, velocity of reaction, A., ii, 359.

Henderson, George Gerald, Thomas Workman Orr, and Robert J. Gibson Whitehead, the action of certain acidic oxides on salts of hydroxy-acids, T., 542; P., 1899, 107.

Henderson, James Alexander Leo, norites [hypersthene, diallage, enstatite, and anorthoclase] from the Transvaal, A., ii, 111.

Henderson, L. J. See Theodore W. Richards.

Henderson, William E., reactions of orthodiazobenzoic acid with sulphurous acid and copper powder, A., i, 430.

Henderson, Yandell, metabolism in the submaxillary gland, A., ii, 774.

Henderson, Yandell. See also Russell H. Chittenden.

Hendricks, W. E. See Edward Kremers. Henrich, Ferdinand, derivatives of amidoorcinol, A., i, 171.

the negative nature of unsaturated groups of atoms, A., i, 469.

ethylic glutaconate. I., A., i, 794.

Henriet, H. See Albert Lévy.

Henriques, Robert, volatile and insoluble fatty acids of butter, A., ii, 258.

Henriques, Robert, and Herm. Künne, oleodistearin, and the iodine number, A., i, 330.

Henry, Charles, [zinc sulphide actinophotometer], A., ii, 394.

Henry, Louis, normal cyanobutylic alcohol, A., i, 182.

----- chlorine derivatives of nitriles containing three and four carbon atoms, and their volatility A i 183

and their volatility, A., i, 183.

aliphatic nitro-compounds with multiple functions, A., i, 251.

Henry, Louis, alkylic salts of the monochloro-derivatives of normal butyric acid and the volatility of chlorine and oxygen compounds, A., i, 255.

- derivatives of aliphatic hydroxy-

nitriles, A., i, 255.

-- nitracetone, A., i, 475.

 hydroxynitriles containing five and six carbon atoms, A., i, 567.

- preparation of ethylenic glycol, A., i. 660.

oxidation of trichlorethoxyethyl-

ene, A., i, 660. - ethyleneacetonitrile, A., i, 675.

-- derivatives of nitroethanol (nitro-

ethylic alcohol), A., i, 728.

- alternation in volatility in the series of the chlorides of the normal acids, A., i, 735.

Henry, Louis [and in part Camille Aschman], unsaturated compounds, A., i, 256.

Henry, Thomas Anderson. See Wyndham R. Dunstan.

Hentschel, W., orthotolylamidoacetic acid, A., i, 815.

- inflammation caused by the vapours of nitrogen chloride, A., ii, 569.

Henze, Martin, condensation of benzylic cyanide with aromatic aldehydes; symmetrical triphenylglutaric acid, A., i, 218.

Hepner, Eberhard, cholesterol of blood, A., ii, 311.

See Otto Fischer. Hepp, Eduard.

Hérissey, Henri. See Émile Bourquelot. Herman, H. N. See John Prochazka.

Herms, Joachim, condensation of acenaphthenequinone and hydrazine hydrate, A., i, 617.

Herms, Joachim. See also Ludwig Berend. Herringham, Wilmot Parker, estimation of potassium and sodium in the urine, A., ii, 333.

toxicity of normal urine, A., ii, 679. Herrmann, Paul, and Daniel Vorländer, behaviour of unsaturated compounds towards ethylic malonate, A., i, 812.

Herrmann, Robert, fatty oil of quince

seeds, A., i, 822.

Herstein, F., and Stanislaus von Kos-4-methoxybenzylidenecoutanecki, maranone, A., i, 369. Herstein, F. See also Stanislaus von

Kostanecki.

Herting, Otto, estimation of sulphur in iron, iron pyrites, slags, coal, coke, asphalt, and gas purifying material, A., ii, 804.

Hertz, M. See Otto Wallach. Herz, W., decomposition of ferric acetate, A., i, 416.

Herz, W., solubilities of sparingly soluble liquids in water, A., ii, 83.

chemical equilibrium between manganous hydroxide and ammonium salts, A., ii, 752.

Herzfeld, Alexander, solubility of lime in water at different temperatures, A., ii, 25.

Herzfelder, Armand Dezsö, basic slags, A., ii, 808.

Herzig, Josef, condensation products of phloroglucinol and of phloroglucide, A., i, 31.

- brazilin and hæmatoxylin, A., i, 381, 821.

Herzog, Al., linseed in its botanical, chemical, and agricultural relations, A., ii, 796.

Herzog, W., cobalt derivatives of sucrose and of dextrose, A., ii, 818.

Hess, Arnold, derivatives of picoline, A., i, 774.

Hess, William H., and Albert B. Prescott, separation and estimation of coumarin and vanillin in flavouring extracts, A., ii, 531.

Hesse, Albert, and Friedrich Müller, ethereal oil of jasmine flowers, A., i, 377, 441.

Hesse, Ludwig, dionine, a new morphine

derivative, A., i, 724.

Hesse, Oswald, Datura alba and hyoscine, A., i, 312.

 lichens and their characteristic constituents, A., i, 381.

Hessler, John C., alkylmalononitriles and their derivatives, A., i, 897.

Hett, P. See C. Ahrens. Henbach, Fritz. See Paul Jacobson.

Heun, Georg. See Hans Stobbe.

Heusler, Friedrich, and Schieffer, preparation of homophthalic acid (orthocarboxyphenylacetic acid) and β -hydrindone from the indene of coal tar, A., i, 365.

Hewitt, John Theodore, and Arthur Ernest Pitt, the condensation of oxalic acid and resorcinol, T., 518; P., 1899, 100.

Heyl, Georg, hydroxydiphenylene ketone, A., i, 216.

hydroxydiphenylene ketone and orthophenylsalicylic acid, A., i, 701.

William Earl, and Julius Hidden, Howard Pratt, associated minerals of rhodolite, A., ii, 300.

Higley, George O. See PaulFreer.

Hilaire. See Saint-Hilaire.

Hilger, Albert. See Adolf Juckenack. Hill, Alfred. See Robert Martin Caven, Frederic Stanley Kipping.

Hill, Henry Barker [with Isaac K. Phelps and Alvin S. Wheeler], preparation and reduction of dehydromucic acid, A., i, 576.

Hill, Henry Barker, and Joseph Torrey, jun., nitromalonic aldehyde, A., i, 788. Hill, Leonard, and H. E. Ridewood,

permeability of animal membranes to gases in solution, A., ii, 437.

Hillebrand, William Francis, vanadium and molybdenum in rocks of the United States, A., ii, 112.

- analyses of tysonite, bastnäsite, prosopite, jeffersonite, covellite, &c.,

A., ii, 301.

- [mineral analyses], A., ii, 564. Hillebrand, William F., Henry W. Turner, and Frank W. Clarke, roscoelite, A., ii, 496.

Hillebrand, William F. See also Henry W. Turner.

Hinsberg, Oscar, derivatives of paramidophenol, A., i, 495.

Hirsch, A., behaviour of iron salts with pyrogallol, A., ii, 817.

Hirschfeld. See Carl Adam Bischoff. Hite, B. H., a method for carrying out chemical reactions under high pres-

sure, A., ii, 592.

Hittorf, [Johann] Wilhelm, and Heinrich [Hermann] Salkowski, a remarkable class of inorganic acids and their electrolytic behaviour, A., ii, 398.

Hjelt, Edvard [Immanuel], isobutylsuc-

cinic acid, A., i, 332. **Hobbs**, William H., crystallography of a reduction product of A4-terpene-3one, A., i, 767.

goldschmidtite, a new mineral, A.,

ii, 493.

Hock, Karl. See Max Conrad.

Höber, Rudolf, alterations of concentration by the diffusion of two substances in solution into one another; absorption in the small intestine, A., ii, 372.

Höber, Rudolf, and Friedrich Kiesow. the taste of salts, A., ii, 206.

Hödlmoser, Carl, meteorite from Zavid, A., ii, 674.

Hödlmoser, Carl. See also Ernst Ludwig. Hoeffken, William D. See Rudolph Fittig.

Hoeper, Victor, electromotive efficiency

of carbonic oxide, A., ii, 541.

Höppner, Max. See Wilhelm Koenigs, Paul Kulisch.

Hoerger, W. See Otto Fischer.

Hoff, Jacobus Henricus van't, and Harry M. Dawson, formation of oceanic salt deposits, particularly of the Stassfurt beds. XII. Hydrate of magnesium sulphate, $MgSO_4, \frac{5}{4}H_2O$, A., ii, 759.

Hoff, Jacobus H. van't, and Wolf Müller, racemic transformation of potassium racemate, A., i, 483.

Hoffmann, G. Christian [baddeckite, tennantite, &c., from Canada], A., ii, 110.

Hoffmann, H. See Emil Knoevenagel. Hoffmann, L., action of hydrazine hydrate on phenols, A., i, 221.

Hoffmann, Paul. See Richard Stoermer. Hoffmeister, H., electrical conductivity in mixed salt solutions, A., ii, 6.

Hofmann, Karl A., action of acetylene on mercuric nitrate, A., i, 97.

 mercury substitution derivatives of ethylic alcohol and acetic acid, A., i, 485.

Hofmann, Karl A., and Eduard C. mercury derivatives Marburg, nitrogen compounds, A., i, 486.

Hofmann, Karl A. See also Volkmar Kohlschütter.

Hoggard, T. See Francis P. Dunning. ton.

Hohenemser, W., and Richard Wolffenstein, stereochemistry of piperidine series, A., i, 936.

Hoitsema, C., non-explosive decomposition, and determination of stability of guncotton, A., i, 243.

- aqueous solutions of two salts with one common ion. II., A., ii, 10.

analysis of honey, A., ii, 818. Holdefleiss, Paul, amount of nitrogenous substances other than proteids in ripe straw and chaff, A., ii, 47.

Hollard, Auguste, analysis of sediment deposited during electrolytic refining

of copper, A., ii, 452.

- electrolytic estimation of lead in the commercial metal and its alloys, A., ii, 523.

Holleman, Arnold Frederik, solubilities of the nitrobenzoic acids, A., i, 141, 282.

influence of alkalis on optically active acids, A., i, 282.

- nitration of benzoic acid and of its methylic and ethylic salts, A., i, 757.

- analysis of mixtures of ortho-, meta-, and para-nitrobenzoic acids, A., ii, 257.

Holly, H. A. See Frank Kenneth Cameron.

Holm. See Carl Adam Bischoff. Holthof, Carl. See Martin Freund.

Holtschmidt, Wilhe indigo, A., ii, 535. Wilhelm, valuation

Holzinger, Otto. See Johannes Thiele. Holzmann, Sigmund, separation and estimation of acids of the saturated fatty series, A., ii, 68.

Hoogeworff, Sebastiaan, and Willem Arne van Dorp, compounds of certain organic acids with sulphuric acid, A., i, 672.

Hope, W. B. See F. Gowland Hopkins. Hopkins, Cyril George, oil of maize, A., ii, 608.

--- some errors in the estimation of

nitrogen, A., ii, 611.

— the incandescent electric lamp as a source of heat in ether extractions, A., ii, 645.

— improvement in the chemical composition of the maize kernel, A., ii, 687.

Hopkins, Cyril G. See also Louis M.

Dennis.

Hopkins, Erastus, D. L. Coburn, and
Edward Spiller analysis of sod oil

Edward Spiller, analysis of sod oil, A., ii, 534.

Hopkins, F. Gowland, and W. B. Hope, uric acid and diet, A., ii, 117.

Hopkins, F. Gowland. See also W. Hale White.

Horlacher, Th. von. See Ludwig Gattermann.

Hornberger, Richard, barium in plants and soil, A., ii, 506.

Hornung, Victor. See Julius Troeger.
 Horowitz, J. See von Dunin-Wasowicz.
 Houdas, study of ivy. Preparation of hederin, A., i, 772.

Howard, Curtis C., and Wilhelm Marckwald, trimethylenimine, A., i, 749.

A., i, 749.

i, 750.

Howe, Ernest. See Philip Embury Browning.

Howe, James Lewis, the place of the new constituents of the atmosphere in the periodic system, A., ii, 740.

Howe, James Lewis, and S. G. Hamner, colour of sulphur vapour, A., ii, 89.

Howe, James Lewis, and J. L. Morrison, action of a hard water on metals, A., ii, 475.

Howe, James Lewis, and E. A. O'Neal, formation of alums by electrolysis, A., ii, 103.

Howell, William H., relation of the blood to the automaticity and sequence of the heart beat, A., ii, 114.

Howitt, Alfred William, oligoclase from

Victoria, A., ii, 566.

Howles, F. H., and Jocelyn Field Thorpe,

8-isopropylglutaric acid, P., 1899, 103.

Hoyer, D. P., acetic acid bacteria, A.,

ii, 784.

Hoyer, E. See Carl Liebermann. Hubner, Otto. See Max Rubner.

Hüfner, [Carl] Gustav, velocity of diffusion of gases through water and through agar jelly, A., ii, 9.

Huelshoff. See Droste-Huelshoff.

Hugershoff, A., preparation of aromatic thiocarbamides, A., i, 886.

Hugot, C., action of sodammonium on arsenic, A., ii, 151.

----- action of potassammonium and sodammonium on selenium, A., ii, 650.

ammonium on tellurium and on

sulphur, A., ii, 747.

Hugounenq, Louis, inorganic compounds and especially those of iron in the human feetus, A., ii, 503.

— mineral composition of the new born child, and Bunge's law, A., ii, 682.

Hugounenq, Louis, and M. Doyon, chemical action of pathogenic microorganisms, A., ii, 376.

Hulett, Georg A., continuous change from solid to liquid, A., ii, 468.

Humnicki, Vincenz, fate of cholesterol in the animal organism, A., ii, 780.

— behaviour of salol and of distearyl salicyl glyceride in the organism, A., ii, 781.

Hunt, H. F., and L. T. Steele, oxidation of aluminium in contact with mercury, A., ii, 33.

Huppert, Karl Hugo, preparation of homogentisic acid and its detection in urine, A., ii, 706.

Hurewitsch, See Carl Adam Bischoff. Hussak, Eugen, so-called "favas" of Brazilian diamond sands, A., ii, 432.

minerals associated with diamonds from Bahia, A., ii, 494.

[cummingtonite from Brazil], A., ii, 564.

Hussey, Neville H. See Walter John Sykes.

Hutchison, Robert, chloride metabolism in pneumonia and acute fevers, A., ii, 168.

Huth, Franz, 2:2':6:6'-tetramethyldipyridyl and the corresponding tetracarboxylic acid, A., i, 934.

Hutton, R. S., compound line spectrum of hydrogen, A., ii, 3.

Hyde, Ellis, paranitrophenylhydrazine derivatives, A., i, 688.

Hyde, Frederick S., analysis of condensed milk, A., ii, 532.

— preparation of graphitoidal silicon, A., ii, 653.

I.

Idzkowska, M., and E. Wagner, oxidation of salicyclic compounds: oxidation of acetyltrimethylene, A., i, 489.

Idzkowska, M. See also Friedrich Kehrmann.

Igler, P. See Eduard AlexandreKehrer.

Imbert, Henri, action of cyanamide on chloranil in presence of potassium hydroxide, A., i, 51.

- action of chloranil on pyridine, A.,

i, 633.

Imbert, Henri, and A. Astruc, acidity

of urine, A., ii, 526.

Imbert, Henri, and P. Compan, volumetric estimation of carbon, A., ii, 576.

Imbert, Henri, and A. Descomps, action of phenylhydrazine on chloranilic acid,

A., i, 690.

Imbert, Henri, and J. Pages, action of sulphanilic acid on chloranil [tetrachloroquinone] in presence of potash,

A., i, 516.

Ipatieff, Wladimir, action of zinc dust on dibromides, C_nH_{2n}Br₂, in alcoholic

solution, A., i, 469.

action of ethylic sodiomalonate on the dibromides, $C_nH_{2n}Br_2$, A., i, 481, 673.

-allene hydrocarbons, A., i, 657. Irvine, James C. See Thomas Purdie. Irvine, Robert. See John Murray. Istrati, Constantin I., 1:3:5-tribromo-

2:4:6-tri-iodobenzene, A., i, 341. - a di-iodoquinoline, A., i, 389.

Istrati, Constantin I., and G. Ettinger. reducing and invertible sugar of maize I. In normal conditions. II. After removal of the ear at the commencement of formation. ii, 506, 507.

Istrati, Constantin I., and Adriano Ostrogovich, cerin and friedelin, A.,

i, 772.

Istrati, Constantin I., and Al. J. Zaharia, solubility of camphor, A., i, 225.

Itzig, Herman. See Arthur Rosenheim.

J.

Jackson, Charles Loring, and F. H. Gazzolo, derivatives of symmetrical trichlorobenzene, A., i, 744.

Jackson, C. Loring, and Waldemar Koch, action of sodium ethoxide on tribromodinitrobenzene, A., i, 677.

Jackson, C. Loring, and J. I. Phinney, ethylic trinitrophenylmalonate, A., i, 602.

Jackson, Henry. See Henry J. Horstman Fenton, William James Sell.

Jackson, Holmes C. See Lafayette B. Mendel.

Jacob, Henri. See Friedrich Kehrmann. Jacobson, Paul, transformation hydrazo-compounds substituted in the

para-position, A., i, 272.

Jacobson, Paul, F. K. Fertsch, and Fritz Heubach, transformation

pariodohydrazobenzene, A., i, 274. Jacobson, Paul, and Rudolf Grosse, transformation of parabromohydrazobenzene, A., i, 273.

Jacobson, Paul, and R. Kunz, transformation of paradimethylamidohydrazobenzene, A., i, 275.

- transformation of paracetamidohydrazobenzene, A., i, 275. Jacobson, Paul, and W. Lischke, trans-

formation of pa benzene, A., i, 276. paramethylhydrazo-

Jacobson, Paul, and Adolf Steinbrenk, transformation of hydrazobenzeneparacarboxylic acid, A., i, 276.

Jacobson, Paul, and Hermann Strübe,

transformation of parachlorohydrazobenzene, A., i, 273.

Jacobson, Paul, and Hermann Tigges, transformation of paracetoxyhydrazobenzene, A., i, 274.

Jacoby, Martin, oxidising ferment in the liver, A., ii, 778.

Jacquemin, Georges, production of aromatic substances by alcoholic fermentation in presence of certain leaves, A., ii, 377.

Jaeger, Ed., volumetric estimation of hydrogen, methane, and nitrogen in mixtures of gases by fractional combustion with copper oxide, A., ii, 526.

Jäger, Emil, gas generator, A., ii, 87. Jäger, Gustav, kinetic theory of liquids, A., ii, 404.

Jaeger, R. See Otto Fischer.

Jänecke, Ernst, amidodiethyl ketone and amidodiethylcarbinol, A., i, 476.

Jaffé, Adolf. See Frederic William Richardson.

Jagelki, Wilhelm, camphenilone, A., i, 627.

Jahn, Hans, electrical conductivity in mixed solutions, A., ii, 6.

galvanic polarisation in solutions of alkali sulphates, A., ii, 542.

Jakowkin, Alexander A., [dissociation of molecular chlorine by water], A.,

James, Charlotte F. See Edward Kremers.

James, Joseph H., electrolysis of benzoin

and benzil, A., i, 909.

James, Martha M. See Edward Kremers. Jandrier, Edmond, colour reaction of oxycellulose, A., i, 788.Jannasch, Paul [Ehrhardt] [with F.

Alffers, G. Devin, Wilhelm Heimann, and M. Müller], quantitative separation of metals by hydroxylamine and hydrazine, A., ii, 59.

Jannasch, Paul, and A. Rathjen, action of ether and aluminium chloride on aromatic hydrocarbons, A., i, 878.

Jannasch, Paul, and Hermann Weber, decomposition of silicates by boric anhydride, A., ii, 578.

Januszewski, Zdzislaw, analysis of plants and soil, and the estimation of the quality of the soil, A., ii, 325.

Japp, Francis Robert, and Alexander Findlay, condensations of anhydracetonebenzil and its homologues with aldehydes, T., 1017; P., 1899, 164.

- triphenyloxazolone, T., 1027; P., 1899, 165.

Japp, Francis R., and Andrew N. Meldrum, interaction of phenanthraquinone, acetophenone, and ammonia, T., 1032; P., 1899, 166.

furfuran derivatives from benzoin and phenols, T., 1035; P., 1899, 167. -interaction of benzoin with phenylenediamines, T., 1043; **1899**, 169.

Jaquet, John Blockley, cobalt deposits of Port Macquairie, New South Wales,

A., ii, 162. Jarry, R., dissociation of ammonio-

metallic salts, A., ii, 738.

Jassoy, Augusta. See Ernst Schmidt.

Jaubert, George F., derivatives of aromatic metadiamines, A., i, 684.

Javillier, pectin from quince, A., i, 822. Jaworowski, Adam, detection of cobalt in the presence of nickel, A., ii, 61.

— detection of turmeric in rhubarb powder, A., ii, 75.

Jay, Henry, estimation of potassium hydrogen tartrate in wines, A., ii, 133.

Jean, Ferdinand, estimation of earthnut oil in admixture in other oils, A., ii, 260.

- detection of formaldehyde in food stuffs, A., ii, 704.

Jeffers, E. Haynes. See Leonard Temple Thorne.

Jeffreys, Elizabeth, preparation of higher aliphatic amines: undecylamine and

pentadecylamine, A., i, 730.

Jenkins, Edward H., and W. E.

Britton, use of artificial manures for forcing-house crops, A., ii, 511.

Jennings, Herbert S., motor reactions and laws of chemotaxis in Paramæcium, A., ii, 440.

Jensch, Edmund, estimation of zinc in ores containing aluminium, A., ii, 522.

Jerdan, David Smiles, the condensation of ethylic acetonedicarboxylate and constitution of triethylic orcinoltri-carboxylate, T., 808; P., 1899, 151. Jereméeff, Pavel V. von, copper, bornite,

and petalite from the Caucasus, A., ii, 108.

copper glance pseudomorphous after copper pyrites, from the Altai Mountains, A., ii, 666.

- garnet pseudomorphous after idocrase, from the Urals, A., ii, 671.

- auerbachite and the rock in which it occurs, A., ii, 673.

pseudomorphs - microcline adularia, from the Altai Mountains, A., ii, 673.

Jerome, William J. Smith, uric acid and the acidity of urine, A., ii, 116.

further proofs of the origin of uric acid from nuclein compounds and derivatives, A., ii, 678.

Jesser, Leopold, the changes in sugar when stored, A., ii, 48.

Joanin, Albert, physiological and toxicological study of ivy and hederin, A., ii, 605.

Joanne. See Brissemoret.

Joannis, [Jean] Alexandre, estimation of hydrogen phosphide in mixtures of gases, A., ii, 612.

Job, André, use of ferrous salts in alkaline solution as a reducing agent in volumetric analysis, A., ii, 51.

 oxidation of cobalt salts in presence of alkalis, A., ii, 61.

peroxidation of cerium in presence of alkali carbonates, A., ii, 291.

volumetric estimation of cerium, A., ii, 334.

- a crystallised double perceric carbonate, A., ii, 486.

Job, Robert, estimation of tin in tinplate, A., ii, 61.

Jocitsch, Živoin, action of zinc dust on alcoholic solutions of α-halogen substituted alcohols, and of zinc shavings on alcoholic solutions of their acetates, A., i, 748.

Joeitsch, Živoin, and Alexei E. Fawor-sky, action of zinc dust on alcoholic solutions of a-halogen substituted alcohols, and of zinc shavings on alcoholic solutions of their acetates, A., i, 786.

Jodin, F. Victor, germ.nation, A., ii, 44.

Jörgensen, Gunner, conditions of development and the composition of the volatile mustard oils in seeds of the Cruciferæ, A., ii, 46.

 iodometric experiments, A., ii, 248. - volatile mustard oils [thiocarbimides] in different rape cakes, A., ii, 797.

Jörgensen, Sofus Mads, preparation of cobaltammine salts, A., ii, 226.

- constitution of cobalt, chromium, and rhodium bases, A., ii, 293.

Joffre, Jules, solubility of calcium phosphate and apatite in water, A., ii, 419.

- phosphates [as manures], A., ii, 610. John, Conrad Heinrich von, mineral waters from East Bohemia, ii, 501.

composition of moldavite, ii, 767.

John, Conrad H. von, and C. Friedrich Eichleiter, analyses of Austrian min-

erals, A., ii, 493. hnson, T. B. Johnson, See Henry Lord Wheeler.

Johnson, W. S. See J. C. Gwillim. Johnston, J. H. See George Herbert Bailey.

Jolles, Adolf, action of iodine on bilirubin, A., i, 830.

- estimation of bile-pigment in urine, A., ii, 459.

- colorimetric estimation of phosphoric acid in water, A., ii, 579.

Jolly, Leopold, phosphorus in urine, A., ii, 41.

Joly, Alexandre, and Emile Leidié, action of heat on the double rhodium alkali nitrites, A., ii, 34.

Jones, Harry Clary, atomic weights of praseodymium and neodymium, A., ii**, 2**92.

Jones, Harry C., and Nicholas Knight, aqueous solutions of double salts. III., A., ii, 628.

Jones, Harry C., and Kenjiro Ota, aqueous solutions of double salts. II. Chlorides, A., ii, 587.

Jones, Louis Cleveland, volumetric estimation of boric acid, A., ii, 332.

Jones, Louis C. See also Frank A. Gooch.

Jones, Walter, melanins, A., i, 396; ii, 439.

Jordan, Edwin O., production of fluorescent pigment by bacteria, A., ii, 318.

Jorissen, W. P., stability of solutions of oxalic acid, A., i, 739.

Jorre, F. See Fritz Foerster.

Jouve, Adolphe, formation of carbamides, A., i, 420.

Jouve, Ad., synthesis of hydroxylamine, A., ii, 364.

Jovitschitsch, Milorad Z., compounds containing a previously unknown ring. 11., A., i, 239.

Juckenack, Adolf, and Albert Hilger, preparation of cholesterol and phytosterol from animal and plant fats, A., i, 38.

K.

Kaehlbrandt, Friedrich. See Rudolph Fittig.

Kahlbaum, Georg. W. A., a new separating funnel, A., ii, 277.

"Genesis of Dalton's Atomic

Theory," A., ii, 740.

Kahle, K., sources of error in the silver

voltameter, A., ii, 347.

Kahlenberg, Louis, differences of potential between metals and non-aqueous solutions of their salts, A., ii, 624.

Kahlenberg, Louis, D. J. Davis, and R. E. Fowler, inversion of sugar by salts. A., ii, 470.

Kahlenberg, Louis, and Azariah T. Lincoln, solutions of silicates of the alkalis, A., ii, 95.

 dissociative power of solvents, A., ii, 397.

Kahlenberg, Louis, and Oswald Schreiner, aqueous soap solutions, A., ii, 202.

See Carl D. Harries. Kaiser, Friedrich. Kaiserstein. See Carl Adam Bischoff. Kalanthar, Anuschawan, hydrolysis of polysaccharides by yeast enzymes, A., i, 102.

Kalecsinszky, Alexander von, salt on shore of Lake Ruszanda, A., ii, 161.

- Hungarian coals, &c., A., ii, 493. Kalmann, Wilhelm, and Moriz Gläser, mineral water from Arva-Polhora, Hungary, A., ii, 771.

Karnojitsky, Aleksandr N. von, minerals (hessonite, &c.) from the urals, A., ii, 37.

Karpinski, Adam, progress of assimilation of oats in the field and in pots, A., ii, 787.

Karukowski. See Carl Adam Bischoff.' Kasai, S., hydrated aluminium silicates, A., ii, 435.

Kassner, Georg, orthoplumbates of the alkaline earths. III. A new higher oxide of lead, A., ii, 657.

Kastle, J. H., relation among the hydrates of the metallic nitrates, A., ii, 210.

 colour of compounds of bromine and iodine A., ii, 476.

Kastle, J. H., and W. A. Beatty, dissociation of phosphorus pentabromide

in solution, A., ii, 481.

Kastle, J. H., and A. S. Loevenhart, oxidation of formaldehyde by hydrogen

peroxide, A., i, 565.

Katsuyama, K., excretion of bases in the urine of fasting rabbits, A., ii, 314.

Katsuyama, K., and S. Hata, dichlorothymolglycuronic acid, A., ii, 117.

Katz, Julius, oil from the rhizome of Aspidium filix mas, A., ii, 324.

estimation of santonin, A., ii, 619. Kauder, E., alkaloids from Anhalonium Lewinii, A., i, 650.

Kauffmann, Hugo, electrolytic reduction of aldehydes and ketones, A., i, 152.

 electrical oscillations, A., ii, 464. Kayser, E., and E. Boullanger, formation of glycogen in yeast, A., ii, 236.

Kehrer, Eduard Alexandre, and P. Igler, preparation of monobasic 4:7diketonic acids, A., i, 568.

Kehrmann, Friedrich, and Walther Aebi, action of amines on salts of 3'-acetamidophenylisonaphthaphenazonium, A., i, 526.

Kehrmann, Friedrich, andGabrielamidoquinones, Bahatrian, Α., i, 31.

Friedrich, AlbertKehrmann, \mathbf{and} Duret, action of alkylorthodiamines on tetrahydroxyquinone and rhodizonic acid, A., i, 83.

an isomeride of diphenylfluor-

indine, A., i, 84. Kehrmann, Friedrich, and Ernst Gauhe, constitution of the nitramidophenol produced by the action of sulphuric acid on orthonitrodiazobenzenimide, A., i, 28.

Kehrmann, Friedrich [with Hugo Grab, Carl Rüst, and Mich. Tichvinsky], stereochemistry of quinoneoximes, A., i, 128.

Kehrmann, Friedrich, and Wanda Haberkant, naphthopicric acid, i, 62.

Kehrmann, Friedrich, and M. kowska, nitroquinone, A., i, 493.

Kehrmann, Friedrich, and Henri Jacob, nitro- and amido-derivatives of phenylisonaphthaphenazonium and of methylnaphthaphenazonium, A., i, 236.

Kehrmann, Friedrich, and Albert Levy, the sixth isomeride of rosinduline, A.,

i, 238.

Kehrmann, Friedrich, and C. Locher, azonium compounds prepared from B-naphthaquinone-4-sulphonic and phenylorthophenylenediamine, A., i, 82.

Kehrmann, Friedrich, and M. Matis, constitution of the dinitro-derivative obtained in the nitration of β -naphthol, A., i, 62.

3'-acetamido-\(\beta\)-naphthaquinone and some of its derivatives, A., i, 81.

Kehrmann, Friedrich, and C. Natcheff, azonium compounds from benzil. III., A., i, 81.

Kehrmann, Friedrich, Ferd. macher, and Otto Feder, nitro- and amido-rosindulines, A., i, 235.

Kehrmann, Friedrich, and M. Ravinson, the seventh isomeride of rosinduline, A., i, 525.

Kehrmann, Friedrich, and W. F. Sutherst, naphthindulines naphthazonium compounds, A., i, 527.

Kehrmann, Friedrich, and W. Woulfson, constitution of the azonium compound from benzil and orthaminodiphenylamine, A., i, 506.

Kehrmann, Friedrich, and Fritz Zimmerli, 3-acetamido-β-naphthaquinone and some of its derivatives, A., i, 79.

Keiser, Edward Harrison, liquid acetylene di-iodide, A., i, 398.

 quantitative synthesis of water, A., ii, 87.

Keller, C. C., estimation of nicotine in tobacco, A., ii, 193.

evaluation of Secale cornutum (ergot of rye), A., ii, 389.
Keller, E., and Stanislaus von Kosta-

necki, 4'-hydroxy-α-naphthaflavone, A., i, 524.

Keller, F. See Carl Graebe.

Keller, Frank H. See George Bell Frankforter.

Keller, Harry Frederick, and Philipp Maas, derivatives of diacetyl, A., i, 11.

Kerckhof, Prosper van de, paraglobulin of blood-serum, A., ii, 231.

Kerkhof, W. See August Michaelis. Kersting, Paul, asbestos, A., ii, 765. Kettner, Arthur. See Rudolph Fittig.

Kieseritzky, Richard, electrometric determinations of constitution, A., ii, 395.

Kiesow, Friedrich. See Rudolf Höber. Kietaibl, Carl, action of nitrous acid on resorcinol monethylic ether, A., i, 343.

Kietreiber, Franz, condensation of the fatty aldehydes with propionic acid, A., i, 331.

Kiliani, Heinrich, digitoxin and digitalin, A., i, 70.

- digitoxin and the products of its decomposition, A., i, 932.

- Digitalinum verum and the pro ducts of its decomposition, A., i, 932. Kiliani, Heinrich, and Adolf Windaus, digitalein, A., i, 932.

- digitogenin and its deriva-

tives, A., i, 932.

Kinzel, Wilhelm, [estimation of allyl-thiocarbimide in] seeds of some varieties of Brassica and Sinapis, A., ii. 825.

Kippenberger, Karl, calcium and magnesium hydrogen carbonates, A., ii, 220.

 estimation of alkaloids by iodine solution, A., ii, 534, 584.

Kipping, Frederic Stanley, derivatives of camphoric acid. Part III., T., 125; P., 1898, 249.

- isomeric salts of hydrindamine containing quinquevalent nitrogen, P.,

1899, 172.

Kipping, F. Stanley, and Miss L. Hall, synthesis of phenoketoheptamethylene, P., 1899, 173.

Kipping, F. Stanley, and Alfred Hill, a-ketotetrahydronaphthalene, T., 144; P., 1899, 4.

Kipping, F. Stanley, and Lorenzo L. Lloyd, organic compounds containing silicon, P., 1899, 174.

Kipping, F. Stanley, and William J.

Pope, characterisation of racemic compounds, T., 36; P., 1898, 219.

the characterisation of "racemic"

liquids, T., 1119; P., 1899, 200.

- recognition of racemic compounds, A., ii, 733.

Kissel, H. See Heinrich Ley.

Kissling, Richard, estimation of nonvolatile organic acids in tobacco, A., ii, 821.

Kistiakowsky, Wladimir A., reactions in mixtures of alcohol and water, A., ii, 13.

- laws of solution, A., ii, 730. Kitt, Moriz, wood oil, A., i, 864.

Kitzing, analysis of antimony sulphide, A., ii, 525.

Kjeldahl, Johan [Gustav Christophe Thorsager], idometric acidimetry, A., ii, 803.

Kjellbom. See Ludwig Gattermann. Klages, August, dihydroanethoil, A., i, 585.

— transformation in the carvone group, A., i, 624.

Klages, August, \mathbf{and} E. Fanto. 1: 1-diphenylbutene-1-one-3, A., i, 615.

Klages, August, and G. Lickroth, elimination of substituting groups from the benzene ring, A., i, 598.

Klebs, Richard, cedarite, an amber-like resin from Canada, A., ii, 34.

Klein, Hermann. See Conrad Willge-

Klein, R. See Carl Schall.

Kleine, Friedrich Karl. See Erich Harnack.

Klenker, Otto, antimony pentasulphide. I. and II., A., ii, 490, 557.

Kling, André, biochemical oxidation of propylenic glycol, A., i, 323.

- action of titanium chloride on organic compounds, A., i, 429.

oxidation of propylenic glycol by bromine water, A., i, 787.

Klinger, Heinrich [Conr.], thioacetaldehydes, A., i, 859.

Klitzsch, Paul. See Otto Fischer.

Klobb [Constant] Timothée, syntheses with ethylic cyanacetate, A., i, 113.

- action of aniline and phenylcarbimide on ketonic acids $C_nH_{2n-10}O_3$ series, A., i, 510. **Klobbie**, *Eduard A.*, volumetric estima-

tion of osmium tetroxide, A., ii, 184.

Kloepfer, E., ammonium sulphate and sodium nitrate [as manures], A., ii, 512.

Klopfer, Volkmar. See Richard Möhlau. Klostermann, Max, alkaloids tained $_{
m in}$ Anagyris fætida, i, 959.

Knauthe, Karl, metabolism in fishes, A., ii, 310.

Knett, Josef, deposition of sulphur and pyrites from the Carlsbad thermal water, A., ii, 772. Knierim, Woldemar von, valuation of

meadow hay, A., ii, 795.

Knight, Nicholas. See Harry C. Jones. Knitl, A. See Alexander Tschirch.

Knoblauch, Oscar, dissipation electrostatic charges by light, A., ii, 622.

Knobloch, Johannes, estimation of the alkaline earths without separation, A., ii, 182.

Knöpfelmacher, Wilhelm, estimation of fat in animal organs, A., ii, 821.

Knöpfer, Gustav. See Guido Gold. schmiedt.

Knoevenagel, Emil, two modifications of ethylic \$\beta\$-amidocrotonate, A., i, 478.

Knoevenagel, Emil [and in part Fr. Baebenroth, and O. Wollweber], condensation of malonic acid with aromatic aldehydes by means ammonia and amines, A., i, 144.

Knoevenagel, Emil, and W. Faber, condensation of acid derivatives of ethylic malonate with ethylic benzylideneacetoacetate, A., i, 146.

- condensing action of diethyl-

amine, A. i, 146.

Knoevenagel, Emil [with F. Giese, J. Goldsmith, and Konrad Wedemeyer], hydrogenised aromatic compounds, A., i, 290.

Knoevenagel, Emil [and in part F. Giese, A. Groos, and H. Hoffmann], condensation of ethylic malonate with aldehydes under the influence of ammonia and organic amines, A., i, 116.

Knoevenagel, Emil [with W. Goecke, Groos, H. Hoffmann, Alfred Schürenberg, Konrad Wedemeyer, and R. Weiss], 1:5-diketones, A., i, 214.

Knoevenagel, Emil, and J. Goldsmith, stereoisomeric oximes in the hydroaromatic series, A., i, 25.

Knoevenagel, Emil, and E. Reinecke, polymerisation of hydroaromatic ketones, A., i, 340.

Knoll, Rudolph Joh., Ogier's sulphur oxychloride, A., ii, 18.

Knoop, H., production of citrate-soluble

phosphate, A., ii, 801.

Knorr, Eduard. See Ludwig Knorr. Knorr, Ludwig, influence of water on the addition of ethylenic oxide to ammonia and amines, A., i, 461.

- breaking down of phenomorpholine b**y** exhaustive methylation, i, 462.

- decomposition of naphthalanmorpholine by exhaustive methylation, A., i, 463.

— tautomerism, A., i, 673.
— morpholine bases: naphthalanmorpholine, A., i, 782.
Knorr, Ludwig, and William Augustus

Caspari, tautomerism: desmotropy of 2-acetylangelicalactone, A., i, 194.

Knorr, Ludwig, and Paul Duden, morpholine bases of the camphor

series, A., i, 783.

Knorr, Ludwig, and Eduard Knorr, synthesis of propanediolamines by the action of ammonia and amines on glycide, A., i, 411.

- 1:3-methylmorpholone, basic δ-lactone, A., i, 784.

Knorr, Ludwig, and Hermann Matthes. breaking down of the morpholine ring exhaustive methylation, i, 462.

Knorre, Georg von, and Kurt Arndt, gasometric estimation of nitric oxide, ii, 806.

Knüttel. See Ludwig Gattermann. Knuttel, Daniel. See Ernst Schmidt.

Koch, Waldemar. See Charles Loring Jackson. Köbner, M. See Ludwig Gattermann.

Köhl, Wilhelm. See Rudolph Fittig. Köhler, E. See August Michaelis.

Kölle, Martin. See William Küster.

König, A., and Arnold Reissert, synthesis of indazoles and phenotriazines, A., i, 457.

König [Franz] Josef, production of nitrogenous manures, A., ii, 49.

estimation of crude fibre in fodders and foods, A., ii, 68.

Koenigs, Wilhelm, derivatives of lepidine, A., i, 74.

 condensation products of formaldehyde and quinaldine, A. i. 389.

Koenigs, Wilhelm, and Max Höppner, derivatives of cinchona alkaloids, A., i, 87.

Koenigs, Wilhelm, and Emil Lossow, 4-nitrocinchonic acid and 4-amidocinchonic acid, A., i, 456.

Köthner, Paul, action of acetylene on mercuric nitrate, A., i, 21.

Köthner, Paul. See also Hugo Erdmann.

Kætschet, J. See Paul Monnet.

Kohl, Friedrich Georg, chlorophyll and

its derivatives, A., i, 228.

Kohler, Elmer P., aliphatic sulphonic acids. II. and III., A., i, 19, 488.

- reaction between aliphatic thiocyanates and metallic derivatives of ethylic acetoacetate and analogous

substances, A., i, 737.

Kohler, Elmer P., and Margaret B. MacDonald, disulphones and ketosul-

phides, A., i, 904.

- action of sulphonic chloride on the metallic derivatives of ethylic salts of ketonic acids, A., i, 907.

Kohlmann, M. See Daniel Vorländer. Kohlmann, Paul. See Paul Kulisch, Hans Stobbe.

Kohlrausch, Friedrich, velocities of the electrical ions in dilute aqueous solution to one-tenth normal concentration at 18°, A., ii, 201.

Kohlschütter, Volkmar, and Karl A. Hofmann, inorganic hydroxylamine

compounds, A., ii, 651.

Kohn, Charles Alexander, and William Trantom, the interaction of sodium hydroxide and benzaldehyde, 1155; P., **1899**, 194.

Kohn, Leopold, action of potassium cyanide on aliphatic aldehydes, A., i, 328.

Kohn, Leopold, and Victor Kulisch, strophanthin, A., i, 159.

Kohn, Leopold. See also Otto Bleier, Adolf Franke.

Kohn, Rudolf, root excretions, A., ii, 791.

Kolda, Edmund, action of ethylenediamine on isobutaldehyde, isovaleraldehyde, acetaldehyde, and glyoxal, A., i, 328.

Kollegorsky, W. See Wilhelm von Miller. Kollock, Lily G., electrolytic estimations

and separations, A., ii, 811.

Komers, K., and Anton Stift, role of pentosans in the manufacture of crude sugar, A., i, 185.

Komppa, Gustav, nitration of guaiacol,

A., i, 346.

ethylic methylenemalonate, A., i, 416.

· hydroxytrimethylsuccinic acid and

its derivatives, A., i, 419.

- 88-dimethylglutaric acid, A., i, 573. Kondakoff, Iwan L., oxidation of unsaturated compounds with potassium permanganate, A., i, 555.

- behaviour of tetramethylethylenic dibromide towards alcoholic potash,

A., i, 556.

Vitali's test for veratrine, A., ii, 827. - dibromopinacolin, A., i, 859.

Koningh, Leonard de, milk analysis, A., ii, 707.

Konowaloff, Dmitri P., combination of sulphur with hydrogen, A., ii, 415.

solutions of silver nitrate, A., ii, 418. Konowaloff, Michaël I., thio-derivatives obtained by the action of aluminium haloids on organic compounds: syn-

thesis of thio-compounds, A., i, 470. action of reducing agents on nitrocompounds of the methane series and their derivatives. I. A method of converting primary and secondary nitrocompounds into the corresponding oximes, ketones, and aldehydes, A., i, 733.

 isomerisation in the synthesis of aromatic hydrocarbons by Friedel's re-IV. Isomerisation of the

isobutyl radicle, A., i, 801.

- action of nitric acid on saturated hydrocarbons. VI. Nitration in sealed tubes and in open vessels. Separation of mono- from di-nitro-compounds, A., i, 844.

- nitrating action of nitric acid on saturated hydrocarbons. VII. Nitration of methylbenzenes, A., i, 873.

preparation of aromatic aldehydes and the artificial production of indigo

dyes, A., i, 891. Konowaloff, Michaël I., and J. Egoroff, isomerisation in the synthesis of aromatic hydrocarbons by Friedel's reaction. III. Synthesis of amylbenzene and its derivatives, A., i, 801.

Kopp, Otto. See Karl Elbs.

Koppel, Ivan, double compounds of cerium tetrachloride, A., ii, 98.

Koppel, Ivan. See also Arthur Rosenheim.

Koppeschaar, W. F., estimation of indigo-blue and indigo-red in natural and synthetical indigos, A., ii, 262.

Kortright, Frederick Lawrence, deliquescence of potassium, sodium, and ammonium nitrates, A., ii, 644.

See Kraatz-Koschlau.

Koske, E. C. W. See Edward Kremers, Kóssa, Julius von, toxic action of sugars, A., ii, 504.

Kossel, Albrecht [Carl Ludwig Martin Leonhard, protamines, A., i, 833.

 preparation and detection of lysine, A., i, 833.

Kostanecki, Stanislaus von, new syntheses in the flavone group, A., i, 368.

Kostanecki, Stanislaus von, R. Levi, and Josef Tambor, synthesis of 2-hydroxyflavone, A., i, 370.

Kostanecki, Stanislaus von, and A. Ludwig, 2-bromoflavone, A., i, 220. Kostanecki, Stanislaus von, and E. Oder-

feld. 2: 4'-dihydroxyflavone, i, 705.

Kostanecki, Stanislaus von, and F. W. 3:4'-dihydroxyflavone, i, 370.

Kostanecki, Stanislaus von, and A. Różycki, alkyl ethers of 3:3':4'-trihydroxybenzylidenecoumaranone, A., i, 911.

Kostanecki, Stanislaus von, and R. von Salis, 3:2'-dihydroxyflavone, i, 523.

Kostanecki, Stanislaus von, and Josef Tambor, the six isomeric monohydroxybenzylideneacetophenones (monohydroxychalkones), A., i, 704.

Kostanecki, Stanislaus von, and Josef Tambor [with B. Bednarski, T. Emilewicz, and \widetilde{F} . Herstein], experiments on the synthesis of chrysin derivatives, A., i, 891.

Kostanecki, Stanislaus von. See also D. Alperin, T. Emilewicz, W. Feuerstein, F. Herstein, E. Keller, N. Prianischnikoff.

Kouznezoff, S. M. See Dm. N. Prianischnikoff.

Kovář, František, ilmenite from Russia. A., ii, 668.

— aluminium phosphate from Moravia, A., ii, 669.

- minerals from Moravia, A., ii, 671. Kozakowski, Stanislaus. See Stefan von Niementowski.

Kraatz-Koschlau, K. von, rhodochrosite from the Odenwald, A., ii, 302.

Kraemer, Henry, examination of commercial flour, A., ii, 703.

Krafft, A. See Fritz Fichter.

Krafft, Friedrich, regularities in the boiling points of liquids in exhausted vessels, A., ii, 464.

-the boiling of aqueous colloidal

solutions, A., ii, 470.

- crystallisation of colloidal salt solutions, A., ii, 471.

- colloidal salts as membrane-formers in dyeing, A., ii, 472.

Krafft, Hermann. See Rudolph Fittig. William, Kramm, new creatinine derivatives, A., i, 86. Kraszler, S. See Carl Schall.

Kraus, C. A. See Edward C. Franklin. Kraus, Gregor, behaviour of calcium oxalate during the growth of vegetable organs, A., ii, 685.

Krause, Max, some oxyazo-compounds, A., i, 272.

derivatives of metahydroxybenzaldehyde, A., i, 281.

Krause. See also Kunz-Krause.

Krawkoff, N. P., chemistry of amyloid

degeneration, A., ii, 42.

Krezmař, Hans, behaviour of phthalide on distillation \mathbf{with} lime, i, 144.

Kreider, D. Albert. See A. W. Wright. Kreis, Hans, Bishop's test for sesamé oil, A., ii, 824.

-Melzer's picrotoxin reaction, A., ii, 827.

Kreis, Hans, and Otto Wolf, detection of phytosterol and cholesterol in fats, A., ii, 343.

Kremel, Alois, detection of aloes, A., ii, 389.

Kremers, Edward, and W. E. Hendricks, composition of Monarda oils, A., i, 770.

Kremers, Edward, and Martha M. volumetric estimation methylic salicylate, A., ii, 192.

Kremers, Edward, and E. C. W. Koske. decomposition of iodoform by light, A., i, 397.

Kremers, Edward, Oswald Schreiner, and Charlotte F. James, caryophyllene derivatives, A., i, 619.

Krenner, József Alexander, jadeite and széchenyiite from Burma, A., ii, 672.

Kreuder, W. See Ludwig Gattermann. Kreusler, H., simple method of reversing

the sodium spectrum, A., ii, 717.

Kreusler [Gottfried Adolf Ernst Wilhelm] Ulrich, soil of Bad-Pyrmont, A., ii, 799.

Kriewitz, O., additive compounds of formaldehyde with terpenes, A., i, 298.

Kritschenko. See Petrenko-Kritschenko.

Krober. See Carl Joseph Lintner.

Kröhnke, Otto, destructive action of water containing carbonic anhydride on iron, A., ii, 752.

Krschischanowsky, W. See Petr G. Melikoff.

Krügel, C. See Albert Ladenburg.

Krüger, Friedrich, ferment action of the Succus entericus, A., ii, 164.

- thiocyanic acid in human saliv**a,** A., ii, 165.

Krüger, Friedrich, and G. Berju, poisonous effect of sodium nitrate, A., ii, 325.

Krüger, Martin, and Georg [Anton] Salomon, epiguanine (7-methylguanine), A., i, 306.

- alloxuric bases present in

urine, A., ii, 233. Krüger, Paul. See Ferdinand Tiemann. Krüger, W., and W. Schneidewind, explanation of denitrification, and of the diminution of crops after the application of fresh farm-yard manure, A., ii, 449.

- causes and importance of the destruction of nitrates in soil, A.,

ii, 510.

Krutwig, Jean, and A. Dernoncourt, influence exercised by temperature and by certain metallic oxides in the formation of sodium sulphate from sulphurous anhydride, air, and sodium chloride, A., ii, 214.

Kryloff, D., composition of the fatty oil

of cedar seeds, A., ii, 711.

Kubli, Melchior, test for the presence of sodium hydrogen carbonate in sodium carbonate, A., ii, 57.

Kübel, F., action of various substances on the activity of saliva, A., ii, 603.

Kühling, Otto, reduction of toluallox-azine, A., i, 722.

Kühn, Julius, experiments on the effect of the phosphoric acid of bone meal, A., ii, 50.

Kühn, M., estimation of fat in milk, A., ii, 582.

Kuenen, J. P., and W. G. Robson, reciprocal solubility of liquids: vapour pressure and critical points of mixtures, A., ii, 356.

Künne, Herm. See Robert Henriques. Küster, Friedrich Wilhelm, velocity of crystallisation. II., A., ii, 15.

conversion of potassium iodide and bromide into potassium chloride, A., ii, 22.

Küster, Friedrich Wilhelm, the change in sulphur by heat, A., ii, 90.

equilibrium in precipitates, A., ii, 205.

üster, Friedrich W., and H. von Steinwehr, electrolytic deposition of Küster, silver from solutions in nitric acid, A., ii, 125.

Küster, Friedrich W., and A. Thiel, estimation of sulphuric acid in the presence of iron, A., ii, 247, 611.

- a new hydrate of ferrous potassium sulphate, and the relative solubilities of the various hydrates of this salt, A., ii, 753.
Küster, William, colouring matters of

bile, A., i, 314.

- colouring matters of blood and bile, A., i, 468.

Kuhn, Christoph Carl. See Johannes Wislicenus.

Kuhn, Otto, preparation of pure silver, A., ii, 366.

Kulisch, Paul, P. Kohlmann, and Max Höppner, estimation of tartaric acid, A., ii, 340.

Kulisch, Victor, preparation of 3-phenyldihydroquinazoline (orexine), A., i, 944.

Kulisch, Victor. See also Leopold Kohn. Kumagawa, Maneo, and Rentaro Miura, formation of sugar in animals, A., ii, 776.

Kunckell, Franz, chemical composition of the shells of Crania, Terebratulina, and Waldheimia, A., ii, 313.

Kunlin, Julius. See Emil Erlen-

meyer, jun.
Kuntz. See Emilio Noelting.
Kuntze, Otto, quenstellite from Iowa,
A., ii, 761.

Kunz, R. See Paul Jacobson.

Kunz-Krause, Hermann, behaviour of certain groups of cyclic compounds towards metallic sodium, A., i, 200.

— chemical constituents of Fabiana

imbricata (Pichi-pichi), A., i, 448.

- action of fuming nitric acid on some synthetically prepared cyclic compounds, A., i, 591.

- [tannins], A., i, 762.

Kuraéeff, D., bromoproteinchrome, A., i, 314.

union of iodine with crystallised eggalbumin and serum-albumin, A., i, 314. protamine of mackerel spermatozoa, A., ii, 313.

Kurnakoff, Nicolai S., and A. A. Sementschenko, hydrate of lithium-

bromocuprite, A., ii, 287. ursanoff, *Nicolai*, m Kursanoff, methylpropylketoxime and secondary amylamine, A., i, 474.

Kusnetzoff, S., formation of Glauber salt [mirabilite] in the Kara-bugas Gulf, A., ii, 303.

Kuszell. See Carl Adam Bischoff. Kutscher, Fr., antipeptone, A., i, 179. Kutznetzoff, P., hydrates of manganous

chloride, A., ii, 658.

Kuylenstjerna, von. See Ludwig Gattermann

Kym, Otto, some amido-α-phenylbenzoxazole derivatives, A., i, 647.

- some amido-a-phenylbenzimidazole derivatives, A., i, 943.

L.

Laar, J. J. van, validity of the dilution law. Reply to objections of Noyes, A., ii, 11.

- heat of dissolution, A., ii, 545. Labbé, Henri, essential oil of thyme, A., i, 621.

— oil of lemon-grass, A., i, 710.

- ethereal salts in oil of lemon-grass. A., i, 711.

- a polymeride of citral, A., i, 769. Labbé, Henri. See also Julien Flatau.

Labhardt, Hans. See Hans Rupe. Laborde, J. [B. Vincent], variations in the production of glycerol in the alcoholic fermentation of sugar, A., ii, 784.

estimation of glycerol in fermented liquids, A., ii, 816.

Laborde, L. See A. Gayon.

Lachman, Arthur, triethylamine oxide, A., i, 326.

- relation of tervalent to quinquevalent nitrogen, A., i, 588.

Lacroix, Alfred, secondary minerals in andesite from Santorin, A., ii, 305.

Ladd, E. F., humates and soil fertility. A., ii, 176.

- proteids of cream, A., ii, 178. - an active principle in millet hay,

A., ii, 240. -comparison of methods for estim-

ating caffeine, A., ii, 262. Ladd, E. F., and P. B. Bottenfield, separation of creatine, A., ii, 262.

Ladenburg, Albert, contribution to the characterisation of racemic compounds. T., 465; P., 1899, 73; discussion, P., 73.

action of ethylenic iodide on pyridine, A., i, 387.

- ozone, A., ii, 18.

- density and molecular weight of ozone, A., ii, 89, 281.

- recognition of racemic compounds. A., ii, 551.

Ladenburg, Albert, and Guido Doctor, conversion temperature of normal strychnine tartrate, A., i, 310.

Ladenburg, Albert, and C. Krügel, specific gravity of liquid air and other liquefied gases, A., ii, 208, 466.

measurement of low tempera-

tures, A., ii, 545.

Ladenburg, Albert [with C. Krügel, Rosenzweig, Theodor, and Brandt], synthetical alkines of the pyridine and piperidine series, A., i, 303.

Lafont, J. See Gustave Bouchardat.

Lahache, E., analysis of waters from the Tougourt-Ourgla district of the Sahara desert, A., ii, 675.

Lamb, Augustus C. See Augustus H. Gill.

Lambling, Eugène, phenylurethanes derived from the ethereal salts and nitriles of some hydroxy-acids, A., i, 52.

diketones of tetrahydro-\$-oxazole derived from the phenylurethanes of some hydroxy-acids, A., i, 84.

Lamouroux, F., solubility of the normal acids of the oxalic series, A., i, 479.

Lamouroux, See also Gustave F. Massol.

Landolph, Frédéric, estimation of diabetic sugar by the polarimeter, by the reducing power, and by fermentation, A., ii, 186.

Landolt, Hans [Heinrich], the melanin

of the eye-ball, A., ii, 777.

WilhelmLandolt, Hans [Heinrich], Ostwald, and Karl Seubert, report of the committee [of the German Chemical Society] on atomic weights, A., ii, 86.

Willy, derivatives of Landsberger, orthotoluonitrile, A., i, 210.

Landsberger, Willy. See also Siegmund Gabriel.

See Max Bam-Landsiedl, Anton.

berger.

Lang. William Robert, and Albert Rigaut, the composition and tensions of dissociation of the ammoniacal chlorides of cadmium, T., 883; P., **1899**, 182.

Lange, A., properties of liquid sulphurous anhydride, A., ii, 478.

-action of liquid sulphurous an-

hydride on iron, A., ii, 594.

Lange, Wm. See Edgar Henry Summerfield Bailey.

Langmuir, A. C., estimation of arsenic

in glycerol, A., ii, 519.
— estimation of zinc, A., ii, 522.

Langworthy, Charles Ford. See Rudolph Fittig.

Lanser, Theodor, preparation of dibromindone from α-dibromocinnamic acid, A., i, 894.

new method of preparing triphenyl-

trimesic acid, A., i, 916.

Lanser, Theodor. See Carl Liebermann. Lapicque, Louis, and A. Vast, action of tolylenediamine on the red corpuscles, A., ii, 505.

Lapworth, Arthur, derivatives of aa'-dibromocamphorsulphonic acid.

558; P., **1899**, 61.

·action of hydrolytic agents on α -dibromocamphor. Constitution bromocamphorenic acid, T., 1134; P., **1899**, 202.

Lapworth, Arthur, and Edgar Marsh Chapman, homocamphoronic and camphoronic acids, T., 986; P., 1899, 159.

Laquer, B., influence of the grape cure on human metabolism, A., ii, 773.

Laska, Leopold. See Max Guthzeit. Lasne, Henri, estimation of phosphoric acid, A., ii, 54.

Lassar-Cohn, products of oxidation of cholic acid, A., i, 552.

 detection of ethylic alcohol in ether, A., ii, 528.

Laszczynski, Boleslaw de Verbno, peptonising enzyme [peptase] in malt; separation of nitrogenous constituents of malt worts and beer, A., ii, 793.

Latimer, Caroline W., modification of rigor mortis by fatigue, A., ii, 117.

Lauder, Alexander. See JamesDobbie.

Lauenstein, O. See Rudolph F. Weinland.

Laurent, Em., Marchal, and Carpiaux, assimilation of nitrogen as ammonia and nitrates by the higher plants, A., ii, 173.

Laurent, Jules, absorption of carbohydrates by the roots of plants, A., ii, 173.

La Valle, Giuseppe, new cobaltiferous and nickeliferous minerals Messina, A., ii, 495.

Lawrence, William Trevor, hydrolysis of the γ-cyanides of di-substituted acetoacetates, T., 417; P., 1898, 251.

-synthesis and preparation of terebic and terpenylic acids, T., 527; P., **1899**, 104.

- ethylic ββ-dimethylpropanetetracarboxylate, P., 1899, 62.

- methylisoamylsuccinic P., 1899, 163.

Lawroff, D., oxyhæmoglobin of the horse, A., ii, 231.

- peptic and tryptic digestion of proteid, A., ii, 309.

Lebbin, Georg, estimation of cellulose, A., ii, 67.

estimation of glycogen in meat extracts, A., ii, 256.

Lebeau, Paul, calcium arsenide, A., ii, 288. -new method for preparing iron

silicide, A., ii, 427.

beryllium, A., ii, 554. - arsenides of strontium, barium, and

calcium, A., ii, 655.

Le Chatelier, Henri [Louis], impurities in commercial calcium carbide, A., ii, 219.

- dissociation of minium, A., ii, 221. ---- use of potassium chlorate in ammonium nitrate explosions, A., ii, 647.

-fixed points of transformation, A., ii, 740.

porcelain from Egypt, A., ii, 751.

Egyptian pottery, A., ii, 752. Le Chatelier, Henri. See also Marcellin Berthelot.

Leclerc du Sablon, digestion of starch in plants, A., ii, 239.

-dextrin considered as reserve material, A., ii, 444.

Leduc, Anatole, researches on gases, A., ii, 354.

ratio of the atomic weights of hydrogen and oxygen, A., ii, 475.

-specific heats of gases and mechanical equivalent of heat, ii, 725.

- application of molecular volumes, A., ii, 729.

Lee, Frederic S., muscle fatigue, A., ii, 312.

Lees, Frederick H., and William Henry **Perkin**, jun., on pseudocampholactone and pseudolauronolic acid, P., 1899,

Léger, Eugène, aloins, A., i, 157, 820. Le Goff, the sugar of diabetic urine, A., i, 242.

Lehfeldt, R. A., properties of liquid mixtures, A., ii, 11.

vapour pressure of solutions of volatile substances, A., ii, 633.

Lehmann, Adolf. See Johannes Wislicenus.

Lehmann, E. See Wilhelm Traube.

Lehmann, Karl Bernhard, estimation of traces of hydrogen sulphide in the air, A., ii, 53.

estimation of copper in vegetable substances, A., ii, 59.

Lehnkering, Paul, valuation of iron and manganese ores, A., ii, 251.

Leidel, L. See Otto Fischer.
Leidie, Emile, purification of iridium, A., ii, 664.

VOL. LXXVI. ii.

Leidié, Émile. See also Alexandre Joly. Leighton, Virgil L., formation of phenylhydrazides by the action of phenyl-hydrazine on organic acids in the cold, A., i, 50.

Leins, Heinrich. See Heinrich Brunner. Lemme, Georg. See Ferdinand Tiemann. Otto. See Lemmermann, Pfeiffer.

Lemoine, Georges, action of magnesium on solutions of its salts, A., ii, 656.

Lemoult, Paul, researches on the polymerisation of cyanogen compounds, A., ii, 546.

Lengfeld, Felix, action of ammonia and amines on silicon chlorides, A., ii, 553. Lengyel, Béla von, water of the Illyés

Lake, Hungary, A., ii, 163. - calcium and calcium hydride, A.,

ii, 218. Lenher, Victor, atomic weight and derivatives of selenium, A., ii, 18.

- preparation of tellurium, ii, 478.

Lenher, Victor, and James S. C. Wells, tests for boric acid, A., ii, 520.

Lenk, Hans, rocks and minerals from Oaxaca, Mexico, A., ii, 305.

Lenormond, C., a chloriodide of tin, A., ii, 33.

- chloriodides [and bromiodides] of tin, A., ii, 754.

Lenz, Wilhelm, estimation of alkaloids in cinchona bark, A., ii, 391. Leo, Hans, estimation of hydrochloric

acid in the contents of the stomach, A., ii, 516. Leonard, Norman, relation between the

sp. gr. and the insoluble fatty acids of butter and other fats, A., ii, 190. Leonard, Norman, and Harry Metcalfe

Smith, examination of camphor liniment, A., ii, 193.

- new test for formaldehyde, A., ii, 454.

See Alberto Peratoner. Leonardi, G. Leontéeff, J. See Hans Rupe.

Lepeschkin, N., lævorotation of dextrotartaric acid in concentrated aqueous solution, A., i, 576.

Lepierre, Charles, action of formaldehyde on proteids, A., i, 654.

- acidity of urine, A., ii, 526. - fluorine in some mineral waters, A., ii, 602.

Lépine, Raphael, and Martz, stimulating action of pancreas on alcoholic fermentation, A., ii, 442.

Lépinois, E., oxidising ferments in aconite and belladonna, A., i, 653.

- acidity of urine, A., ii, 526. Leprince, Cascara sagrada, A., i, 820. Lera. See Boggio-Lera.

Le-Roy, A., detection of sawdust in flour, A., ii, 453.

Leroy, Émile [thermochemistry of], morphine and its salts, A., ii, 465. thermochemistry of some opium

alkaloids, A., ii, 631.

Lesceur, Henri, alkalimetric estimation of metals: estimation of mercury, A., ii, 183.

Léser, Georges, derivatives of natural and of synthetical methylheptenone, A., i, 190, 329.

- methyloctenonal, A., i, 414.

– isomeride of hydroxymenthylic acid, A., i, 479.

 cyclic isomeric change of acetylmethylheptenone, A., i, 743.

Léser, Georges. See also Philippe Barbier. Lespieau, Robert, epidibromhydrins, A., i, 184.

-action of hydrocyanic acid on epichlorhydrin, A., i, 243.

dichlorobutyric \mathbf{acid} (dichloro-3: 4-butanoic acid), A., i, 790.

Lessing. See Loewinson-Lessing.

Le Sueur, Henry Rondel, and Arthur W. Crossley, new method for the determination of the melting point of fats, A., ii, 271.

Le Sueur, Henry Rondel. See also Arthur William Crossley.

Leupold, Ernst. See Siegmund Gabriel. Levaditi. See Albert Charrin.

Levat, David, the black phosphates of the Pyrenees, A., ii, 229.

Levene, P. A., iodine in the tissues after the administration of potassium iodide, A., ii, 312.

Levene, P. A., and I. Levin, absorption of proteids, A., ii, 309.

Levi, R. See Stanislaus von Kostanecki. Levin, I. See P. A. Levene.

Lévy, Albert, and H. Henriet, atmospheric carbonic anhydride, ii, 94.

Lévy, Albert, and Félix Marboutin, estimation of dissolved oxygen in water, A., ii, 381.

Lévy, Albert. See also Friedrich Kehr-

Lévy, [Auguste] Michel [classification of the volcanic rocks of Mont-Dorel, A., ii, 500.

Lewis, Gilbert Newton. See Theodore W. Richards.

Lewis, J. Volney, corundum from the Appalachians, A., ii, 561.

Lewkowitsch, Julius, cacao butter, A., ii, 712.

Ley, Heinrich, and H. Kissel, chemistry of mercury, A., ii, 485.

Leys, Alexander, estimation of formic acid in the presence of acetic acid and of easily oxidisable substances, A., ii, 132.

 detection of formaldehyde in milk, A., ii, 819.

Lickroth, G. See August Klages. Lidbury, F. Austin. See David Leonard Chapman.

Lieben, Adolf, presence of simple organic compounds in the vegetable kingdom. A., ii, 45.

Liebermann, Carl [Theodor], colour reactions of indones and of quinones with malonic acid derivatives, A., i, 219, 373.

Liebermann, Carl [Theodor] [and in part E. Hoyer, Theodor Lanser, F. Michel, and Fritz Wiedermann], reactions of indones and quinones with derivatives

of malonic acid, A., i, 522.

Liebermann, Carl, and S. Schlossberg,
Meldola and Hughes' bromindone derivatives and perinaphthaquinone,

A., i, 372, 764.

Liebig, Hans von, condensation of benzil and benzoin with resorcinol, A., i. 915. Liebknecht, Otto. See Arthur Rosenheim.

Liebmann, Adolf, paranitraniline-red [estimation of α-naphthol in β-naphthol], A., ii, 65.

Liebmann, Adolf, and Arthur Studer, analysis of aniline oils and aniline salt, A., ii, 583.

Liebrich, A., estimation of traces of lead in water, A., ii, 58.

Liebscher, Georg, and Edler, determination of the manurial requirements of soils, A., ii, 691.

Lienau, Hermann, manganese silicocarbonates from the Hautes Pyrénées, A., ii, 761.

Lienau, Hermann. See Arthur Rosenheim.

Liesegang, R. Ed., the latent photographic image, A., ii, 720.

Limpricht, Heinrich, compounds of benzoic or phthalic chloride and ethereal salts of the three hydroxybenzoic acids, A., i, 292.

Limpricht, Heinrich, and H. Seyler, dimethylanilidophthaloylic acid, A., i, 815.

Linck, Gottlob Ed., the heteromorphic (allotropic) modifications of phosphorus and arsenic, and of ferrous sulphide, A., ii, 415.

- meteorite from Meuselbach, Thuringia, A., ii, 566.

Lincoln, Azariah T. See Louis Kahlen-

berg. Linde, Carl, machines for the manufacture of liquid air, A., ii, 414.

Linde, Otto, precipitates in Extr. fluid. hydrastis, A., i, 395.

· is hydrastine free or combined in Hydrastis rhizome and in the liquid extract? A., i, 395.

methods of estimating alkaloids,

A., ii, 534, 826.

Lindet, Léon, Girard's researches on caoutchouc milk, A., ii, 507.

Lindet, Léon. See also Aimé Girard. Linebarger, Charles Elijah, speed of coag-

ulation of colloidal substances, A., ii, 12. surface tensions of solutions of alkali chlorides, A., ii, 469.

Ling, Arthur Robert, Clerget's method of estimating saccharose, A., ii, 66.

- malt. I. The ready-formed sugars of malt and the action of diastase on

barley-starch, A., ii, 187.

Ling, Arthur R., and Julian L. Baker, modification of Clerget's saccharimetric process applicable to after-products and molasses, A., ii, 67.

Lingenbrink, Edmund. See Max Busch. Lintner, Carl Joseph, estimation of bitter principles in hops, A., ii, 264.

Lintner, Carl J., and Krober, estimation of sugars as osazones, A., ii, 66.

Lipczynski, E. See Otto Wallach.

Lippmann, Edmund O. von, d-trihydroxyglutaric acid, A., i, 576.

- occurrence of cholesterol in the products of the beet sugar manufacture, A., i, 586.

Lippmann, Eduard, and Franz Fleissner, the ketones of anthracene, A., i, 918. Lischke, W. See Paul Jacobson.

Littmann, Sigismund, volumetric citrate process for the rapid and accurate estimation of phosphoric acid in super-

phosphates, A., ii, 330.

Lloyd, Lorenzo L., and John J. Sudborough, diortho-substituted benzoic

Part IV. Formation of salts from diortho-substituted benzoic acids and different organic bases, T., 580; P., 1899, 3.

Lloyd, Lorenzo L. See also Frederic Stanley Kipping, John J. Sudborough.

Locher, C. See Friedrich Kehrmann. Locke, James, and Gaston H. Edwards, an isomeride of potassium ferricyanide, A., i, 407.

 formation of potassium β-ferricyanide through the action of acids on the normal ferricyanide, A., i, 557.

Lockyer, Sir Joseph Norman, appearance of the clevite and the other new gas lines in the hottest stars, A., ii, 4.

— spectrum of the corona, A., ii, 717. — chemical classification of the stars, A., ii, 718.

Loczka, József, behaviour of thallium in acid solutions with hydrogen sulphide in presence of arsenic, A., ii, 100.

Loeb, Jacques, physiological action of alkali and acids when greatly diluted, A., ii, 167.

-similarity of the absorption of liquids in muscle and in soaps, A., ii, 503.

Löb, Walther, electrolytic reduction of the nitro-group, A., i, 122

Löhr, H. See Otto Wallach.

Loewnhart, A. S. See J. H. Kastle. Loew, Oscar, new hexosazones from

glycerol and formaldehyde, A., i, 850. - di-iodoacetylidene as a poison, A., ii, 169.

- lability and energy in relation to protoplasm, A., ii, 607.

physiological functions of calcium salts, A., ii, 789.

Löwe, K. Friedrich, electrical dispersion of some organic acids, ethereal salts, and ten varieties of glass, A., ii, 200.

Löwenherz, Richard, stability of the halogen derivatives of benzene, A., ii, 639.

Loewinson Lessing, Franz, [analyses of felspars], A., ii, 766.

Lohnstein, Theodor, areometric estimation of dextrose in urine, A., ii, 579.

Lohse, Otto, asbestos filters. ii, 801.

Lombard, G., modification of Kaemer's method for the analysis of cream of tartar, A., ii, 820.
Long, J. C., solubility of lead sulphate

in aqueous ammonium acetate, A., ii, 812.

Long, John Harper, optical rotation of pinene hydrochloride, A., i, 819.

Longi, Antonio, analysis of organic substances containing sulphur and halogens, A., ii, 328.

Lorenz, Richard, alteration of free energy in molten halogen compounds of some heavy metals, A., ii, 269.

Lorenzen, Ferdinand. See Theodor Curtius.

Lossow, Emil. See Wilhelm Koenigs. Lott, Francis Edward, influence of mineral constituents of water on the composition of worts and yeast ash, A., ii, 683.

Lottermoser, Alfred, colloidal metals: colloidal bismuth and copper, A., ii, 558.

Loubiou, A., use of lead dioxide as a means of clarifying urine for analysis. A., ii, 72.

Louginine. See Luginin.

1899, 25.

Louise, Emile, detection and estimation of free phosphorus in oils and fats, A., ii, 807.

Lowenhaupt, Victor Cordier von, bases isomeric with cinchonine, A., i, 176. Lowry, Thomas Martin, studies of the terpenes and allied compounds. Nitrocamphor and its derivatives. IV. Nitrocamphor as an example of dynamic isomerism, T., 211; P.,

-crystallisation of dynamic isomerides: a correction, P., 1899, 76.

Lucas, Ad., nitroacetophenone andnitroacetone, A., i, 433.

Lucas, Maurice, estimation of oxygen in copper, A., ii, 52.

-colorimetric estimation of copper, A., ii, 522.

- separation of copper from antimony, A., ii, 523.

-colorimetric estimation of nickel, A., ii, 614.

Lucchesi, Adolfo. See Ubaldo Antony. Ludwig, A. See Stanislaus von Kostanecki.

Ludwig, Ernst, Carl Hödlmoser, and Theodor Panzer, the Franzenbad mineral peat soil, A., ii, 798.

Luginin, Wladimir F., latent heats of vaporisation of liquids, A., ii, 269.

- heat of vaporisation of piperidine, pyridine, acetonitrile and capronitrile, A., ii, 354.

Lumière, Auguste, Louis Lumière, and Alphonse Seyewetz, a reaction of aldehydes and ketones, A., i, 415.

Lumière, Louis. See Auguste Lumière. Lunge, Georg, estimation of sulphur in presence of iron, A., ii, 329.

- estimation of sulphuric acid in the

presence of iron, A., ii, 805. Lunge, Georg, and E. Weintraub, nitrocellulose, A., i, 559.

- behaviour of nitric peroxide with sulphuric acid, A., ii, 479.

Luppe, R. See Wilhelm von Miller. Lusini, Valerio, physiological and toxic action of methylxanthines, and their influence in muscular fatigue, A., ii, 317.

Lusk, Graham. See F. H. Parker, W. E. Ray.

Luther, Robert, a third class of electrodes, A., ii, 5.

Lyebyedyev, A., assimilability of organic nitrogen in sterilised media, A., ii, 689.

Maas, Joseph, nitro-alcohols, A., i, 322. Mass, Philipp. See Harry F. Keller.

TheodorMaas. A.See Siegmund Gabriel, Arthur Rosenheim.

Maass, Emil, and Richard Wolffenstein, amidoaldehyles, A., i, 110.

Mabery, Charles Frederic, and Edwin B. Baltzley, sodium aluminate as a means for the removal of lime and suspended matter from water for use in boilers, A., ii, 476.

Mabery, Charles F., and Leo Goldsmith, influence of antiseptics on the artificial gastric digestion of fibrin, A., ii, 164.

Macadam, Ivison. See Diarmid Noël-Paton.

Macallum, A. B., the microchemical detection [localisation] of phosphorus in animal and vegetable tissues, A., ii, 232.

McCay, Le Roy Wiley, interaction of sodium arsenite and sodium thiosulphate, A., ii, 96.

- thioxyarsenic acids, A., ii, 745.

McCoy, Herbert N., hydrochlorides of carbophenylimide, A., i, 359.

McDermott, T. S. See W. E. Ray. MacDonald, Margaret B. See Elmer P. Kohler.

Macdougald, George D., apparatus for rapid analysis of milk, A., ii, 582.

MacGregor, James G., and E. H. Archibald, conductivity method of studying moderately dilute aqueous solutions of double salts, A., ii, 201.

Mache, H. See Ludwig Boltzmann.

McIlhiney, Parker C., method for determining the resistance of electrolytes, A., ii, 6.

McIntosh, Douglas, normal elements, A., ii, 77.

- transference number for hydrogen, A., ii, 137.

McKee, R. H. See Julius Stieglitz. McKenna, Charles F., new apparatus for

the determination of volume, A.. ii, 467.

McKenzie, Alex., active and inactive phenylalkyloxyacetic acids, T., 753; P., **1899**, 149.

- a contribution to the chemistry of mandelic acid, T., 964; P., 1899, 186. McKenzie, Alex. See also Wilhelm

Marckwald. Mackey, William McDonnell, and R. E. Middleton, colorimetric estimation of dissolved oxygenin water, ii, 244.

MacMunn, Charles Alexander, pigments of Aplysia punctata, A., ii, 313.

Maercker, Max [Heinrich], influence of various plants on the amount of moisture in the soil, A., ii, 689.

Maercker, Max [Heinrich], manurial experiments with sugar beet, A., ii, 691.

- manurial and variety experiments

with barley, A., ii, 691.

- limits of error in the estimation of phosphoric acid soluble in citric acid, A., ii., 807.

Maercker, Max. See also H. Steffeck. Macy, E., compounds of lithium, sodium, and potassium with mercury, as indicated by the specific volumes, A., ii, 547.

Magnier de la Source, Louis, estimation of potassium hydrogen tartrate in

wines, A., ii, 70.

Mai, Ludwig. See Martin Freund.

Maillard, Louis, crystallised fibrin, A., i, 466.

-ionisation and toxic action metallic salts: copper sulphate and Penicillium glaucum, A., ii, 570.

Maisel. See Carl Adam Bischoff.

Majewski, J., and Georg Wagner, camphenylic acid and its derivatives, A., i, 629.

Majstorovié, R. See Alexander Zega. Malagnini, Giovanni. See Girolamo Daccomo.

Malerba, Pasquale, detection of acetone, A., ii, 132.

Mallet, E., estimation of uric acid, A., ii, 706.

Mallet, John William, claims of davyum to recognition as an element, A., ii, 107.

- analytical methods for distinguishing proteid and amidic nitrogen, A., ii, 576.

Malpeaux, L., employment of alinit in the cultivation of cereals, ii, 242.

- manurial value of oil cakes, A., ii, 378.

Malpeaux, L. See also Dickson. Manasse, E. See Ubaldo Antony.

Manasse, Otto, melting points of some derivatives of amidocamphor (correction), A., i, 300.

Manasse, Otto, and Ernst Samuel, reactions of camphoquinone, A., i, 300.

Manchot, Wilhelm, hydroxytriazolecarboxylic acid and hydroxytriazole, A., i, 84.

Manchot, Wilhelm. See also Johannes Thiele.

Mannino, V. See Amerigo Andreocci. Manthey, W., monobromotruxone from a-bromallocinnamic acid, A., i, 894.

Manuelli, C., and E. Comanducci, action of primary amines on urethanes, A., i, 887.

Manuelli, C., and E. Ricca-Rosellini, action of organic bases on urethane, A., i, 887.

Manuelli, C., and E. de Righi, action of phenylhydrazine on tricarballylic and citric acids, A., i, 884.

Maquenne, Léon, change in composition of oleaginous seeds during germination, A., ii, 171.

- estimation of dextrose by Leh-

mann's method, A., ii, 529.

Maquenne, Léon, and E. Roux, estimation of nitrogen by Kjeldahl's method,

A., ii, 381. Marboutin, Félix, volumetric method for the estimation of combined sul-

phuric acid, A., ii, 247. Marboutin, Felix, and Michel Franck, estimation of organic matter in water by potassium permanganate, A., ii, 184.

Marboutin, Félix, and Marcel Molinié, volumetric estimation of combined

sulphuric acid, A., ii, 247, 518.

Marboutin, Félix, and Adrien Pécoul, estimation of sulphuric acid, A., ii, 180.

- apparatus for obtaining synchronous gaseous currents in the estimation of atmospheric gases, A., ii, 517.

Marboutin, Félix, Adrien Pécoul, and Marius Bouyssy, absorption of traces of carbonic anhydride in gaseous mixtures, A., ii, 577.

Marboutin, Félix. See also Albert Lévy.

Marburg, Eduard C. See Karl A. Hofmann.

March. See Eugène Charabot.

Marchal. See Em. Laurent. Marchetti, G., hydrated blue molyb-

denum oxide, A., ii, 295.

Marchis, L., gradual change of glass and the variation of the zero point of thermometers, A., ii, 545.

Marchlewski, Leo, chlorophyll, A., i, 381, 822.

- gossypol, a constituent of cotton seeds, A., i, 821.

Marchlewski, Leo, and L. G. Radcliffe, indigotin, A., i, 74.

--- constitution of indican and of some derivatives of indigotin, A., i, 386.

marckwald, Wilhelm, hydrazo- and azocompounds of the pyridine series, A., i, 72.

the silver salts of d-, l-, and dlmethylethylacetic acid and the synthesis of d-valeric acid, A., i, 477.

Marckwald, Wilhelm, stereoisomeric thiosemicarbazides, A., i, 503.

Marckwald, Wilhelm, and S. Axelrod,

optically active a-methylmalic acid (2-methyl-2-butanoldioic acid), A.,

Marckwald, Wilhelm, and Albert (Freiherr) von Droste-Huelshoff, preparation of secondary amines from sul-phonamides, A., i, 289.

methylethylpropylisobutyl-

ammonium base, A., i, 326.

Marckwald, Wilhelm, and McKenzie, new method for the resolution of racemic compounds into their

active components, A., ii, 733.

Marckwald, Wilhelm. See also Curtis

C. Howard.

Marcuse, Arthur, and Richard Wolffenstein, stereochemistry of the piperidine series, A., i, 937.

Mareeuw. See Driessen-Mareeuw.

Margosches, B. M. See Eduard Donath.

Margueles, Max, dissolving of platinum and gold in electrolytes, A., ii, 200.

Marino, L., oxidising action of hydroxylamine, A., ii, 553.

Markownikoff, Wladimir B., derivatives of the naphthene or cyclohexane

series, A., i, 22. - action of nitric acid and of nitrosulphuric acid on saturated hydrocarbons, A., i, 553.

- quaternary paraffins, CR4, A., i, 554.

- methylpentamethylene and its derivatives, A., i, 799.

- structure of the so-called hexanaphthenecarboxylic acid, A., i, 800.

Markownikoff, Wladimir B., and Wladimir Rudewitsch, cyclic compounds: symmetrical dimethylethylnaphthene, A., i, 581.

Marmier, Louis, and Henri Abraham, sterilisation of potable waters by ozone, A., ii, 506.

Maronneau, Georges, preparation and properties of a crystalline copper subphosphide, A., ii, 421. Marquis, R., benzoylfurfuran, A., i, 798.

Marschall, composition of the mycelium

of mould fungi, A., ii, 44.

Marsh, James Ernest, the action of sulphuric acid on fenchone, T., 1058; P., 1899, 196.

- is camphene saturated? P., 1899,

Marshall, Arthur, estimation of carbonic anhydride in minerals, A., ii, 249.

- preparation of standard solutions of sulphuric acid, A., ii, 575.

Marshall, Arthur, influence of ammonium salts on the precipitation of nickel by ammonia, A., ii, 696.

Martin, Charles James, the relations of the toxin and anti-toxin of snake venom, A., ii, 782.

Martin, Charles James, and Thomas Cherry, antagonism between toxins and anti-toxins, A., ii, 234.

Martin, G. C., dunite in Massachusetts, A., ii, 112.

Martini, C., constitution of dichlor-orthocresol, A., i, 877.

Martz. See Raphael Lépine.

Marzichi, Giulio. See Hugo Schiff.

Mascart, Eleuthère [Èlie Nicolas], and H. Bénard, rotatory power of sugar

solutions, A., i, 851.

Maselli, C. See Giuseppe Grassi-Cristaldi.

Mason, William P., measurement of "turbidity" in water, A., ii, 615.

Massol, Gustave, relation between the melting points and the molecular weights of the normal and non-normal acids of the oxalic acid series, A., i, 738.

- thermochemistry of suberic acid,

A., ii, 80.

 thermochemistry of sebacic acid, A., ii, 80.

- normal dibasic acids of the oxalic series, A., ii, 80.

- thermochemistry of isoamylmalonic

acid, A., ii, 143.

 thermal study of normal propylmalonic acid: heat of formation of the solid potassium salt, A., ii, 204.

thermochemistry of azelaic acid,

A., ii, 353.

- heat of formation of sodium metaand para-hydroxybenzoates, A., ii, 353.

-thermal study of the hydroxybenzoic acids: influence of the phenolic hydroxyl, A., ii, 353.

- thermal relations of normal butylmalonic acid, A., ii, 547.

Massol, Gustave, and F. Lamouroux, solubility of substituted malonic acids, A., i, 479.

Masson [David] Orme, velocity of migration of ions, A., ii, 625.

Masson, [David] Orme, and B. D. Steele, the blue salt of Fehling's solution and other cuprotartrates, T. 725; P., 1899, 120; discussion, P., 120.

Masson, V., purification and preservation of chloroform, A., i, 786.

Mastbaum, Hugo, ignition of magnesium ammonium phosphate, A., ii, 55.

Matcovitch, A. See Johannes Pinnow. Matfus, Israel. See Carl D. Harries.

Mathews, John Alexander, action of organic acids on nitriles, A., i, 56.

Matignon, Camille, change of entropy in the dissociation of similar heterogeneous systems, A., ii, 273.

Matignon, Camille, and Deligny, nitrosoderivatives of aromatic amines, A.,

Matis, M. See Friedrich Kehrmann.

Matteucci, R. Vittorio, iodine and bromine in fumarole products from Vesuvius, A., ii, 600.

– sodium hydrogen carbonate on Ve-

suvian lava, A., ii, 600.

Matteucci, R. Vittorio, and Ercole Giustiniani, selenium in fumarole products from Vesuvius, A., ii, 600.

Matthaiopoulos, Georg, derivatives of monochloracetoxime, A., i, 10.

Matthes, See Ludwig Hermann. Knorr.

Matthews, Albert, origin of fibrinogen,

A., ii, 777. Matthews, Charles George, and G. H.Woolcott, phosphoric acid in barley

and malt; presence of organic acids in malt, A., ii, 174. Matthews, J. Merritt, derivatives of the

tetrachlorides of zirconium, thorium, and lead, A., ii, 295.

- derivatives of the tetrabromides of zirconium and thorium, A., ii, 296.

 preparation of zirconium nitrides, A., ii, 296.

- separation of iron from zirconium and allied metals, A., ii, 335.

Maxwell, Walter, estimation of the lime, potash, and phosphoric acid in Hawaiian soils probably available for the immediate crop, A_{\cdot} , ii, 521.

Mayençon, François, detection of phosphorus in insoluble substances by

sterelectrolysis, A., ii, 181.

Mayer, Adolf, estimation of calcium carbonate in marl and soil, A., ii, 385.

Mayer, Paul, formation of sugar from egg-albumin, A., i, 787. See also Ferdinand Blu-

Mayer, Paul.

menthal. Mayo, A. D. See George B. Frankforter.

Mayr, Ernst. See Johannes Thiele. Mayrhofer, F. See Carl D. Harries.

Mazé, Pierre, assimilation of oxidised and amidic nitrogen by the higher plants, A., ii, 237.

- assimilation of carbohydrates and elaboration of organic nitrogen by

higher plants, A., ii, 321.

- physiological significance of alcohol in the vegetable kingdom, ii, 607.

Mazzara, Girolamo, action of sulphuryl chloride on alkylic hydroxybenzoates, A., i, 700, 810.

Mazzara, Girolamo [and A. Roland], action of sulphuryl chloride on alkylic parahydroxybenzoates, A., i, 811.

Meade, Richard K., new volumetric method for the estimation of copper,

A., ii, 58.

Mecke and Wimmer, alkaloid simi'ar to strychnine found in a corpse, A., i, 311. Megerle, W. See Alfred Werner.

Megraw, H. A. See William Ridgely Orndorff.

Meillère, G., assay of iodoform, A., ii, 184.

- use of a centrifugal machine to collect precipitates in quantitative analysis, A., ii, 610.

Meillère, G., and Ph. Chappelle, estimation of sugars by weighing the copper precipitate, A., ii, 616.

Meineke, C., estimation of sulphuric acid with especial reference to the estimation of sulphur in iron ores, and the products of the metallurgy of iron, A., ii, 518.

estimation of sulphur in substances

rich in iron, A., ii, 693.

Meisenheimer, Jakob. See Johannes Thiele.

Meiser, Wilhelm, derivatives of cyclopentane and of dipentamethenyl, A., i, 741.

Meissel, N., synthesis of organic compounds by means of ferric chloride,

A., i, 880. Meissl, Emerich and Otto Reitmair, field experiments on the effect of the phosphoric acid of basic slag and bonemeal, A., ii, 379.

Melchiker, P., chlorophosphine of ortho-

chlorotoluene, A., i, 207

Meldola, Raphael, paranitro-orthanis-idine, P., 1898, 226.

- the naphthaquinone from dibromα-naphthol, A., i, 372.

Meldola, Raphael, and Percy Phillip Phillips, amidoamidines of the naphthalene series, T., 1011; P., 1899, 187.

Meldrum, Andrew N. See Francis Robert Japp.

Meldrum, Robert, action of water on metallic copper and lead, A., ii, 100. - action of water and saline solutions

on metallic iron, A., ii, 103.

 precipitation of cadmium by hydrogen sulphide, A., ii, 812.

Melikoff, Petr G., mud volcanos of Achtala, A., ii, 229.

– meteorite from Zmjenj, Russia, A., ii, 771.

Melikoff, Petr G., and W. Krschischanowsky, meteorite from Migheja, A., ii, 230.

Melikoff, Petr G., and W. Krschischanowsky, meteorites from Mighei, Russia, A., ii, 770.

Melikoff, Petr G., and L. Pissarjewsky, peroxides, A., ii, 30.

- permolybdates, A., ii, 31. · salts of pyropervanadic acid and the constitution of the peracid salts, A., ii, 298.

- perniobic and pertantalic acids

and their salts, A., ii, 491. - lanthanum peroxide, A., ii, 598.

Melnikoff, Michail P., loranskite, a new mineral, A., ii, 669.

Melzer, Herm., solubility of coniine in carbon disulphide, A., i, 394.

- reactions of alkaloids with benzaldehyde and sulphuric acid, A., ii, 193. Mendel, Lafayette B., absorption of proteids, A., ii, 230.

-absorption fromthe peritoneal cavity, A., ii, 309, 440.

Mendel, Lafayette B., and Holmes C. Jackson, excretion of cynurenic acid, A., ii, 117.

Mendel, Lafayette B. See also Russell

H. Chittenden. Menegazzi, G. P., toxicology of phenol,

A., ii, 317.

Mengarini. See Cecchi-Mengarini. Mengel, P., separation of cerium from lanthanum and didymium and its estimation in the presence of the latter, A., ii, 223.

Menke, Albert E., specific gravity of

cæsium, A., ii, 483.

Menke, Albert E. See also Hugo Erdmann.

Menozzi, Angelo, amount of pentosans in vegetable and other substances, A., ii, 682.

Menschutkin, Boris N., formation of dimethylaniline by the action of bromo- or iodo-benzene and phenol on dimethylamine, A., i, 499.

salts of methylaniline and dimethylaniline with halogen acids, A., i, 499. Menschutkin, BorisN. See also

Alesei A. Wolkoff.

Menschutkin, Nicolai A., action of phosphorus tribromide on isomeric monatomic saturated alcohols. Allylpiperidine and allyldipropylamine, A., i, 937.

Mer, Emile, the causes of the transformation of sap-wood into wood in oaks (Quercus Robur and Q. pedunculata)

A., ii, 607.

Merck, [Carl] Emanuel, derivatives of

morphine, A., i, 649.

- [derivatives of ethoxyphenol], A., i, 802.

Merck, Louis, the hyoscine-scopolamine question, A., i, 91.

Merz, Victor, and H. Strasser, naphthyl-

ated benzidines, A., i, 917. essinger, Carl. See Emerique C. Messinger, Szarvasy.

Methner, Theodor, influence of the quality of the ether on the estimation of fat in food-stuffs, A., ii, 821.

Metzke, Hermann, arsenates of iron, A., ii, 293.

Metzner, René, copper selenate: preparation of selenic acid, A., ii, 20.

 selenium and tellurium compounds, A., ii, 364.

Meunier. See Leo Vignon.

Meunier, Jean. See Camille Vincent.
Meyer, Arthur, life-history of starch grains in the higher plants, A., ii, 321.

Meyer, Hans, cantharadin. II. Isomerides of cantharidin, A., i, 380.

- constitution of phenolphthalein, A, i, 707.

- anemonin, A., i, 930.

Meyer, Richard E., and Alfred Conzetti, derivatives of diphenylmethane, A., i, 763.

Meyer, Richard E., and Leo Friedland,

derivatives of fluoran, A., i, 764.

Meyer, Richard E., and Rudolf Gross,

benzoflavines, A., i, 945.

Meyer, Richard E., and W. Sundmacher, derivatives of metamidophenol, A., i, 755.

Meyer, Richard Jos., separation and estimation of chlorine, bromine, and iodine in halogen salts, A., ii, 611.

Meyer, Richard Jos., and P. Bruger, picrotoxin, A., i, 226.

Meyer, Stefan, magnetic properties of the elements, A., ii, 587.

Meyerhoffer, Wilhelm, change of volume at the transition point of boracite, A., ii, 729.

Meyerhoffer, Wilhelm, and A. P. Saunders, a new fixed point in ther-A proposal for a normal mometry.

room temperature, A., ii, 7.

—— reciprocal salt pairs. II.

Equilibrium phenomena in the presence of a double salt, A., ii, 410.

Michael, Arthur, substitution of alkyl radicles for sodium in ethylic phenylsulphonesodioacetate, A., i, 816.

Michaelis [Carl Arnold] August, and W. Kerkhof, salol-o-phosphinic acid,

Michaelis, August, and E. Köhler, a new series of betaines, A., i, 596.

Michaelis, August, and R. Pasternack,

5-chloro-1-phenyl-3-methylpyrazole, A., i, 941.

Michaelis, August, and M. Pitsch, action of aqueous alcoholic alkalis on phosphorus, A., ii, 285.

Michaelis, August, and Hans Röhmer, chlorophenyldimethylpyrisomeric azoles, A., i, 233.

-- simple conversion of pyrazolones into pyrazoles, A., i, 233.

- 3-hydroxy-1-phenyl-5-pyrazolone, A., i, 233.

Michailenko, Jakov, action of zinc on a mixture of ethylic bromisobutyrate and ethylic formate; synthesis of symmetrical \$-hydroxytetramethylglutaric acid, A., i, 482.

Michel, F. See Carl Liebermann.

Michel, bismuthiferous Léopold, molybdenite, A., ii, 561.

Michel, L'eopold.See also Léon Garnier.

Micko, Karl, capsaicin, A., i, 716.

Middleton, R. E. See WilliamMcDonnell Mackey.

Miers, Henry Alexander [and Ernald G. J. Hartley], blende and zinciferous galena, A., ii, 431.

Milch, Ludwig, granitic rocks of the Riesengebirge, A., ii, 112.

Millar, James Hills. See Horace T. Brown.

Miller, W., ethylic azelate, A., i, 791.

iller, W., and A. Tschitschkin, azelaone, A., i, 789. Miller,

Miller, Wilhelm von, and Josef Plochl, action of cinnamaldehyde on phenyltoluidoacetonitrile, A., i, 159.

Miller, Wilhelm von, and Josef Plöchl [with Bruno Bruhn, Ludwig Gerngross, J. Hamburger, W. Kollegorsky, R. Luppe, P. Scheitz, and Wilhelm Sieber], behaviour of substituted amidonitriles towards aromatic aldehydes in presence of alkali, A., i, 127.

Miller, Willet G., nickeliferous magnetites, A., ii, 109.

Miller, IV. IV., jun., emery Virginia, A., ii, 759. from

-- smithsonite from Arkansas, A., ii, 761.

- sandstone from Augusta Co. Virginia, A., ii, 769.

Millosevich. Frederico. sulphur and other minerals from the Malfidano mines near Buggerru, Sardinia, ii., 492.

Mills, W. H., and Thomas Hill Easterfield, derivatives of dibenzylmesitylene,

P., 1899, 22.

Milobendski, Th., behaviour of isomeric alcohols with phosphorous trichloride, A., i, 659.

Minet, Adolphe, impurities in aluminium, A., ii, 487.

Mingaye, John C. H., analyses of phos: phates from New South Wales, A., ii, 670.

phosphatic deposits in the Jenolan caves, New South Wales, A., ii, 670.

Minguin, Jules, corrosion figures showing the enantiomorphous structure of benzylidenecamphors, A., i, 771.

Minkowski, Oskar, uric acid in mam-

mals, A., ii, 778.

Minovici, Stephen S., condensation of the cyanhydrins of benzaldehyde and anisaldehyde, A., i, 890.

Minozzi, A., the affinity between acids and bases in methylic alcoholic solution, A., ii, 642.

- mo lification of Sprengel's pyknometer, A., ii, 646.

Minssen, H, See G. Schliebs.

Miolati, Arturo, preparation of carbonatotetramminecobalt hydrogen bonate, A., ii, 369.

Miolati, Arturo, and Ugo Alvisi, electrolytic behaviour of some complex fluorides and oxyfluorides, ii, 350.

Mitchell, Charles Ainsworth. See Otto Hehner.

Miura, Rentaro. See Muneo Kumagawa. Mixter, William Gilbert, electrosynthesis, A., ii, 266.

Moebes, A. See Emil Erlenmeyer, jun. Möhlau, Richard, new reactions for paraquinone and paraquinonoid compounds, A., i, 61.

Möhlau, Richard, and Volkmar Klopfer, products of the action of sulphur on dimethylaniline, A., i, 240.

- condensation of benzhydrols

with paraquinones and paraquinonoid compounds, A., i, 912. Möslinger, a new principle for the testing

of sugared (Gallisierter) wines, A., ii, 709.

Mogk, W. A. See George B. Wallace. Ernst, β-diazopyridine Mohr, B-diazoamidopyridine, A., i, 72.

Mohr, Ernst. See also Theodor Curtius. Mohr, E. C. J., equilibrium in the system-water, ammonium chloride, ferric chloride, A., ii, 15.

Moissan, Henri, action of acetylene on metal-ammoniums, A., i, 241.

- lithium-methylammonium, i, 410.

- calcium hydride, A., ii, 25.

- preparation of lithiun and calcium ammonias \mathbf{and} the corresponding amides, A., ii, 152.

- properties of calcium, A., ii, 153.

Moissan, Henri, preparation and properties of calcium nitride, A., ii, 155. colour of calcium carbide, A., ii. 219.

heat of formation of calcium oxide.

A., ii, 352.

 preparation and properties of crystallised calcium phosphide, ii, 418.

- applications of aluminium,

ii, 425.

- formation of carbides of the alkali and alkaline earth metals and of magnesium, A., ii, 554.

electrolytic preparation of fluorine

in a copper vessel, A., ii, 593.

Moissan, Henri, and Alexandre [Léon] Etard, preparation and properties of thorium carbide, A., ii, 227.

Moitessier, Joseph, compounds of phenyl-hydrazine with haloid salts of the alkaline earth metals, A., i, 205.

- compounds of phenylhydrazine with metallic thiosulphates, dithionates, and hypophosphites, A., i, 688.

-combination of phenylhydrazine and other bases with metallic salts,

A., i, 752.

 compounds of phenylhydrazine with cuprous salts, A., i, 807.

Mokiewsky, Wladimir, isoprene, A., i, 726.

 action of zinc dust on bromalcohols, A., i, 729.

-action of hydrogen bromide on

glycols, A., i, 729.

Moldenhauer, Fr., estimation of lead in ores, A., ii, 57.

Molinié, Marcel. See Félix Marboutin.

Molz, Wilhelm. See Franz Feist. Mondolfo, G. H., valuation of persulphates, A., ii, 805.

Mondolfo, G. H. See also Ubaldo

Antony.

Monnet, Paul, and Louis Benda, action of carbonic anhydride on the sodium derivatives of the nitrophenols, A., i, 585.

Monnet, Paul, and J. Keetschet, sacchareins: a new class of colouring matters derived from orthobenzoic sulphinide, A., i, 212, 289.

Montecchi, G., reactions of mercurio-aniline, A., i, 429.

Montemartini, Clemente, action of chlorine on isobutylacetic acid, A.,

- condensations with ethylic β-chlorisovalerate, A., i, 420.

Clemente, Montemartini, and D. Trasciatti, estimation of morphine in opium, A., ii, 619.

Moody, Gerald Tattersall, propylbenzenesulphonic acids, P., 1899, 17.

Moore, Benjamin, and Swale Vincent, comparative chemistry of the suprarenal capsules, A., ii, 41.

Moraczewski, Waclaw von, excretion of the constituents of urine in fever, A., ii, 441.

More, Andrew, chemical examination of the oleo-resin of Dacryodes hexandra, T., 718; P., 1899, 150.

Moreau. See Paul Cazeneuve.

Moreigne, Henri, modification Mörner and Sjöqvist's method of estimating urea, A., ii, 72.

-estimation of urea in urine by means of sodium hypobromite, A.,

ii, 73.

- relation between the total nitrogen of urine and the nitrogen present as urea, A., ii, 73, 314.

presence of tyrosine and leucine in the urine from a case of cystinuria. Detection of tyrosine, A., ii, 317.

Morel, Albert, phenylic alkylic phosphates, A., i, 264, 492, 747, 875. mixed guaiacylic alkylic carbonates, A., i, 586.

Morel, Albert. See Etienne Barral, Paul Cazeneuve.

Morgan, Gilbert Thomas, note on the interaction of formaldehyde with &-Thomas, note on the naphthylamine derivatives, P., 1899, 9.

Morgan, John Livingston Rutgers, theory of the separation of barium, strontium, and calcium from the mixed sulphates, A., ii, 627.

Morgan, J. Livingston R., and A. H. Gotthelf, theory of the formation of nickel sulphide, A., ii, 626.

Morgan, William Conger. See John L. Bridge.

Morishima, Kurata, alkaloids contained in Lycoris radiata, Herb., A., i, 92.

- proteid of wheat gluten, A., i, 466. Moritz, B., practical utility of semipermeable membranes, A., ii, 721.

Moritz, Carl, and Richard Wolffenstein, action of potassium persulphate on aromatic hydrocarbons, A., i, 424.

- action of potassium persulphate on alkyl groups, A., i, 910.

Moritz, P. See Wilhelm Biedermann. Morozewicz, Józef, formation minerals in magmas, A., ii, 762.

Morpurgo, Giulo, artificial coloration of

coffee, A., ii, 134.

Morrell, Robert Selby, and James Murray Crofts, action of hydrogen peroxide on carbohydrates in the presence of foreign salts, T., 786; P., 1899, 99; discussion, P., 100.

Morris, George Harris, analysis of brew-

ing sugars, A., ii, 187.

Morrison, J. L. See James Lewis Howe. Mosnier, A., compounds of lead iodide with other iodides, metallic or organic, A., ii, 222.

Moszczenski, John, estimation of tartaric acid, A., ii, 69.

Mott, Frederick Walker, and Wakelin Wallerian Barratt, chemistry of degeneration, A., ii, 317.

Mott, Frederick W., and William D. Halliburton, physiological action of choline and neurine, A., ii, 781.

Mott, Frederick W. See also William

 ${\it D}$. Halliburton.

Motta, A. See Giuseppe Grassi-Cristaldi.

Moufang, Nicola, and Julius Tafel, brucine, A., i, 309.

ethylstrychnine and benzylstrychnine, A., i, 310.

Mouneyrat, Antoine, bromination with aluminium bromide in the aliphatic series, A., i, 1.

action of bromine on propylic bromide in presence of aluminium bromide, A., i, 97.

- action of chlorine on acetylenic tetrabromide in presence of aluminium chloride, A., i, 241.

- action of chlorine on pentachlor-ethane in presence of aluminium

chloride, A., i, 241.

— action of bromine on chloral in presence of aluminium chloride, A., i, 247.

 action of iodine chloride on chlorobenzene in presence of aluminium chloride, A., i, 341.

action of chlorine on chloroform and of bromine on bromoform in presence of the corresponding aluminium halogen salts, A., i, 397.

action of bromine on ethylic bromide in presence of aluminium bromide, A., i, 470.

-action of aluminium chloride on acetylene tetrachloride, A., i, 470.

- action of bromine on acetylene tetrachloride in presence of aluminium chloride, A., i, 470.

 action of hexachlorethane on benzene in presence of aluminium chloride, A., i, 490.

action of pentachlorethane and of tetrachlorethylene on benzene in presence of aluminium chloride, A., i, 490.

— action of bromine on αβ-propylenic bromide in presence of anhydrous aluminium bromide: preparation of aaß-tribromopropane, A., i, 555.

Mouneyrat, Antoine, action of bromine on aaß-tribromopropane and on tribromhydrin in presence of aluminium bromide: preparation of $\alpha\alpha\beta\gamma$ -tetrabromopropane, A., i, 556.

action of chlorine on propylic

chloride in presence of aluminium chloride, A., i, 725.

action of bromine on isobutylic bromide in presence of aluminium bromide and chloride, A., i, 186.

- chlorination of carbon disulphide in presence of aluminium chloride, A., ii, 365.

Mouneyrat, Antoine, and Ch. Pouret. chlorination of benzene in presence of aluminium chloride, A., i, 263.

 action of bromine on chlorobenzene in presence of anhydrous aluminium chloride: preparation of parabromochlorobenzene, A., i, 584.

Mourelo, José Rodriguez, phosphorescent strontium sulphides, A., ii, 97, 98,

366, 420.

- action of manganese in producing phosphorescence of strontium sulphide, A., ii, 484.

Moureu, Charles, ethanedicatechol or glyoxaldicatechol [dicatechol acetylenic ether], A., i, 30, 679.

- bromocamphor, A., i, 68.

- hydrolysis of ethanedicatechol [dicatechol acetylenic ether], A., i, 125. - glyoxal catechol, A., i, 138.

aromatic allylic and propenylic ethers, A., i, 427. orthohydroxyphenoxyacetone, A.,

i, 433. · ethanecatechol [catechol ethylenic

ether], A., i, 493.

- ethylenecatechol [catechol acetylenic ether], A., i, 494. - methylethylenecatechol [catechol

methylacetylenic ether], A., i, 494. - synthesis of estragole, and

allylic compounds, A., i, 494. · orthohydroxyphenoxyacetic

and orthophenylenedioxydiacetic acid, A., i, 700.

Mourlot, A., anhydrous crystalline magnesium sulphide, A., ii, 27.

- crystallisation of anhydrous calcium and strontium sulphides, A., ii, 97. - metallic sulphides, A., ii, 747.

Moyer, J. Bird, separations of metallic sulphides by means of hydrogen chloride, A., ii, 697.

Mrazec, L., riebeckite and ægirine in granite from Turcoaia, Roumania, A., ii, 768.

Müller, Erich, pyrogenic decomposition of gas-oil, phenol, and cresol, A., i, 27. Müller, Erich, electrolytic method of preparing alkali chlorates, bromates, and iodates, A., ii, 742.

Müller, Fr. See Hugo von Soden.

Müller, Friedrich, and John Seemann, sugar from albumin, A., i, 968.

Müller, Friedrich. See Albert Hesse.

Müller, M. See Paul Jannasch.

Müller, O., experiments with ferric sulphate for killing the denitrifying organism in stable manure, and preventing erysipelas and swine fever, A., ii, 506.

Müller, Paul, separation of albumoses

from peptone, A., ii, 136.

Müller, Wilhelm. See Richard Willstätter.

Müller, Wolf. See Jacobus H. van't Hoff. Müller-Erzbach, Wilhelm, distance of action of molecular forces, A., ii, 412.

Müncker, Heinrich. See Max Busch. Mulder, Fduard. silver peroxysulphate,

A., ii, 483.

Muller, Joseph Auguste, theory of the action of carbonic oxide on a solution of potassium ferrocyanide, A., i, 728. - estimation of ferrocyanides and

carbonylferrocyanides, and their separation, A., ii, 616.

uller, Paul Thiebaut, velocity of limited reactions, A., ii, 358. Muller, Paul

- law of the dilution of electrolytes, A., ii, 396.

Muller, Paul Thiebaut. See also Albin Haller.

Mulliken, S. P., and E. R. Barker, reactions for the detection of the nitro-

group, A., ii, 382.

Mulliken, S. P., and H. Scudder, colour reaction for methylic alcohol, A., ii, 388.

Murmann, Ernst, a new form of crucible: the tube crucible, A., ii, 122.

estimation of zinc and manganese

as sulphides, A., ii, 126. Murray, John, and Robert Irvine, chemi-

cal changes in oceanic deposits, A., ii, 437.

Murrill, Paul, picoline haloids and perhaloids, A., i, 934.

Muspratt, Max, and E. Shrapnel-Smith, high strength hypochlorite solutions,

A., ii, 281, 553. uttelet, Fernand, dinitrophenyldiacetylmethane, A., i, 281. Muttelet,

· iminoimines (amidines), A., i, 354. action of aniline on dinitrodiphenyl-

diacetylmethane, A., i, 435.

amidoamidines. IV., A, i, 500.

Mylius, Franz, and Rudolf Dietz, pure platinum metals of commerce, A., ii, 160.

N.

Nabl, Arnold, colouring substances con tained in amethyst, citrine, and burnt amethyst, A., ii, 561.

Nägeli, Ernest, preparation of diphenylmethyleneaniline, A., i, 910.

- nitration at elevated temperatures, A., i, 916.

Nagornoff, Nicolai N., action of amines on the bromonitrobenzenes, A., i, 425.

Nannes, G., forms of phosphoric acid in peaty soil, A., ii, 798.

Nasini, Raffaele, Francesco Anderlini, and Roberto Salvadori, probable presence of coronium and new elements in the solfatara of Pozzuoli and Vesuvius. A., ii, 482.

Nasini, Raffaele, and Roberto Salvadori, water of Bagnoli, Tuscany, A., ii, 771.

Natcheff, C. See Friedrich Kehrmann. Natterer, Konrad, chemical investiga-

tions in the Red Sea, A., ii, 501. Naumann, Alexander, reactions in anhydrous solvents, A., ii, 423.

Naumoff, S. See Nicolai D. Zelinsky. Naylor, William Arthur Harnson, alkaloidal constituents of Cascarilla bark, A., i, 179.

Nebelthau, Eberhard, hæmatoporphyrinuria, A., ii, 568.

Nef, John Ulric, formhydroxamic acid,

A., i, 109.
Nencki, Marcellus, organic syntheses by

means of ferric chloride, A., i, 879. Nencki, Marcellus, and J. Zaleski, behaviour of benzoyl peroxide and calcium peroxide in the digestive canal in dogs and men, A., ii, 676.

Nerking, Joseph, estimation of fat in animal tissues and fluids, A., ii, 191.

Nerking, Joseph. See also Eduard Pflüger.

Nernst, Walther, and Emil Bose, osmotic theory of the galvanic cell, A., ii, 345.

Nesbitt, Beattie, choline and neurine in the intestine during its complete obstruction, A., ii, 310.

Neuberg, Carl, a compound of glycuronic acid with parabromophenylhydrazine, A., i, 933.

estimation of phenol in urine, A.,

ii, 454. detection and estimation of form-

aldehyde, A., ii, 580. Neuberg, L., See Alfred Wohl.

Neuman, Albert, nucleins, A., i, 467. estimation of phosphoric acid for physiological purposes, A., ii, 54.

Neumann, B., electrolytic estimation of nickel in presence of iron, A., ii, 386.

Neumann, Paul, composition of the water chesnut (Trapa natans), A., ii, 794.

Newbury, Frederick George. See Arthur George Perkin.

Newman, Frank H. See Johannes Wislicenus.

Newmann, J. See Karl Elbs.

Newton, Edwin Tulley, and J. J. Harris Teall, rocks from Franz Josef Land, A., ii, 163.

Nicloux, Maurice, estimation of small quantities of methylic alcohol, formaldehyde, and formic acid, A., ii, 253.

estimation of traces of carbonic oxide in air, A., ii, 333.

Nicol, B. A. See Marcus Seymour Pembery.

Nicolaéeff, Peter D., analysis of loranskite, A., ii, 669.

Niementowski, Stefan von (and in part Stanislaus Kozakowski), new types of anhydro-compounds, A.,

i, 643.

Nietzki, Rudolph, and W. Geese, oxidation products of diquinoyltetroxime, A., i, 347.

Nilson, Lars Fredrik. See Carl Gustaf Eggertz.

Noël-Paton, Diarmid, conversion of liver glycogen into glucose, A., ii, 312.

Noël-Paton, Diarmid, James Crauford Dunlop, and Ivison Macadam, modifications of metabolism produced by diphtheria toxin, A., ii, 602.

Noelting, Emilio, and Bianchi, azodyes derived from 2': 1-naphthylamidosulphonic acid. A., i. 374.

amidosulphonic acid, A., i, 374.

Noelting, Emilio, and G. Forel, influence of oxidising substances on the solubility of gold in alkali cyanides, A., ii, 755.

Noelting, Emilio, and Kuntz, a new class of dyes, the diamidodiphenyl-benzenylamidines, A., i, 354.

Noelting, Emilio, and Paira, isomerides of the rhodamines and the pararhodamines, A., i, 371.

Noetzel, Max. See Hans Stobbe.

Noll, Alfred, quantitative relations of protagon to the medulla of nerves, A., ii, 568.

Nordenström, Gustaf, inflammable gas in metalliferous mines, A., ii, 370.

Norris, James F., and Arthur I. Franklin, composition of nitrogen iodide and the action of iodine on fatty amines, A., i, 663.

Norton, John T., jun., influence of hydrochloric acid on titration with sodium thiosulphate, with especial reference to the estimation of selenious acid, A., ii, 518.

estimation of iron in the ferric state by reduction with sodium thiosulphate and titration with iodine, A., ii, 613.

Noyes, Arthur Amos, solubility of mixed electrolytes of two ions containing no common ion, A., ii, 9.

--- relation between osmotic work and osmotic pressure, A., ii, 357.

— thermodynamical expressions for the heats of dissolution and dissociation of electrolytes, A., ii, 401.

Noyes, Arthur A., and Edward S. Chapin, solubility of acids in solutions of the salts of other acids, A., ii, 274.

two ions on the solubility of an electrolyte of two ions on the solubility of an electrolyte with three ions, A., ii, 405.

Noyes, Arthur Amos, and George J. Cottle, reaction between silver acetate and sodium formate, a reaction of the third order, A., ii, 205.

Noyes, Arthur Amos, and David Schwartz, solubility of salts of a weak acid in a strong acid, A., ii, 10.

Noyes, Arthur Amos, and J. Seidensticker, solubility of iodine in dilute solutions of potassium iodide, A., ii, 11.

Noyes, William Albert, camphoric acid.
V. [Derivatives of xylene], A.,i, 284.
— camphoric acid. VI., A., i, 759.

Noyes, William Albert [and J. W. Shepherd], constitution of camphoric acid; synthesis of ethylic cyanodimethylcyclopentanonecarboxylate, A., i, 928.

Nyssens, detection of perchlorate in Chili saltpetre, A., ii, 327.

0.

Oberländer, Eugen. See Ludwig Gattermann.

Obermayer, Fritz, estimation of urinary indican, A., ii, 263.

estimation of indoxylsulphuric acid (indican) in urine, A., ii, 458.

cuprite and malachite, A., ii, 760. **Ochsenius**, *Carl*, occurrence of iodine in cuprite and malachite, A., ii, 760.

Oderfeld, E. See Stainslaus von Kostanecki.

Oechsner de Coninck, William, action of oxidising agents on nitrogenous compounds, A., i, 243.

oxidation of some carbamides, A., i, 420.

--- oxidation of secondary and tertiary amines A., i, 472.

Oechsner de Coninck, William, action of oxidising agents on some amides, A., i, 508.

study of an oxyptomaine, A., i, 830.
elimination of chlorides in rachitis,

A., ii, 42.

elimination of nitrogen and phosphorus during assimilation, A., ii, 678.

Oechsner de Coninck, William, and A.

Combe, action of oxidising agents on fatty and aromatic amines, A., i, 244.

oxidation of aromatic compounds, A., i, 347.

Oehler, Eugen, chemistry of lignite tar, A., i, 816.

Ochmichen, Carl G. See Ludwig Gattermann.

Oertel, Horst, organic phosphorus in urine, A., ii, 116.

Oesterle, O. A., aloin, A., i, 538.

Oesterreich, Paul R. See Johns

Oesterreich, Paul R. See Johannes
Pinnow.

Oettel, Felix, electrolysis of solutions of calcium chloride, A., ii, 219.

Œttinger, G. See Constantin I. Istrati.
Offret, A., and Henri Vittenet, three crystalline forms of dimetanitrodiphenylearbamide, A., i, 886.

Ogawa, Masataka. See Edward Divers. Ogg, A., chemical equilibrium between amalgams and solutions, A., ii, 14.

Ohligmacher, C. See Otto Wallach.
Ohly, Julius, chromylamide, A., ii, 754.
Okerblom, Johann, xanthine bases in the

Okerblom, Johann, xanthine bases in the suprarenals, A., ii, 778.
O'Neal, E. A. See James Lewis Howe.

Onfroy, P., gelatin in chocolate, A., ii, 76.
Oppenheimer, Carl, precipitation of acetone with mercuric sulphate, A., i, 475.

Oppenheimer, S., magnetic rotation in salt solutions. A., ii. 139.

salt solutions, A., ii, 139.

O'Reilly, Joseph P., anatase and brookite from near Dublin, A., ii, 497.

Orloff, E., analysis of nitrites, A., ii, 693.

Orloff, N. A., betaine contained in the root of Althewa officinalis, A., i, 44.

Orloff, P., influence of various subtances in solution on the crystalline form of sodium chloride, A., ii, 654.

Orndorff, William Ridgely, and H. A. Megraw, dimethyldianthracene, a polymeride of β-methylanthracene, A., i, 819.

A., i, 819. Orr, Thomas Workman. See George Gerald Henderson.

Ortmann, Alfred, detection of arsenic in coal-tar colours, A., ii, 181.

Ortoleva, Giovanni, action of iodine on cinnamic acid in pyridine solution, A., i, 894.

Orton, Kennedy Joseph Previte. See Frederick D. Chattaway.

Osborne, Thomas Burr, definite compounds of proteids with mineral acids, A., i, 836.

---- egg-albumin, A., i, 837.

Osborne, W. A., invertin, A., i, 967.
Osborne, Wilhelm. See Johannes Thiele.
O'Shaughnessy, F. R. See Henry Droop
Richmond.

Osius, F. W. See Stanislaus von Kostanecki.

Osmond, Floris, alloys of iron and nickel, A., ii, 351.

effect of low temperatures on steel,
A., ii, 630.

Ossenbeck, A. See Theodor Zincke. Osswald, G. See Arthur Hantzsch. Ostrogovich, Adriano. See Constantin

I. Istrati.
Ostwald, Wilhelm. See Hans Landolt.
Oswald, Ad., the proteids of the thyroid

gland, A., ii, 439. Ota, Kenjiro. See Harry C. Jones.

Otto, Marius, ozone, A., ii, 282.

Otto, Richard, fermentation of bilberry must, A., ii, 505.

Otto, Robert, and Julius Troeger, the Crodo spring at the Juliushall bath, Harzburg, Harz mountains, A., ii, 437.

P.

Paal, Carl, and H. Apitzsch, nitrosacylamines, A., i, 268.

Paal, Carl, and C. Benker, retardation of chemical reactions due to stereochemical influences. I. Paranitrobenzylic bases, A., i, 587.

Paal, Carl, and Friedr. Härtel, retardation of chemical reactions due to stereochemical influences. II. Hydroxybenzylic bises, A., i, 748.

Paal, Carl, and Hermann Stern, two isomeric chlorodiphenacyls, A., i, 367.
 iododiphenacyls, A., i, 367.

Päpke. See Carl Adam Bischoff.

Paessler and Spanjer, estimation of the acidity of anning liquors, A., ii, 618.

Pagel. See Charles Frédéric Schlagdenhauffen.

Pagés, J. See Henri Imbert.

Pagnoul, Aimé, effect of perchlorate present in potassium nitrate, on vegetation, A., ii, 243.

influence of light on the growth of clover, A., ii, 788.

Pailhade. See Rey-Pailhade. Paira. See Emilio Noelting.

Pakis. See Carl Adam Bischoff.

Palacre, Charles, powellite crystals from Michigan, A., ii, 495. Palas, A., detection of rape oil, A., ii, 72.
Palladin, Wladimir, modifications of plant respiration resulting from variations of temperature, A., ii, 686.

Palmaer, Wilhelm, chemical proof of concentration change with drop electrodes. A ii 347

trodes, A., ii, 347.

apparatus for the purification of mercury, A., ii, 485.

Panormoff, Alexei A., globulin of white of egg, A., i, 654.

albumins of white of egg, A., i, 655.

Panzer, Theodor. See Ernst Ludwig.
Papasogli, G., some characteristic reactions of nickel, and cobalt, A., ii, 335.

Paradeis. See Ludwig Gattermann.

Paris, Giulio, detection of fluorine in wine, A., ii, 804.

Paris, Giulio. See also Arthur Born-

träger.

Park, James, and Frank Rutley, rhyolites of the Hauraki goldfields, New Zealand, A., ii. 769.

land, A., ii, 769.

Parker, F. H., and Graham Lusk, maximum production of hippuric acid in rabbits, A., ii, 312.

Parker, J. Gordon. See Henry Richardson Procter.

Parkin, John, formation, storage, and depletion of carbohydrates in monocotyledons, A., ii, 790.

Parmentier, F., alleged existence of fluorine in certain mineral waters, A., ii, 501, 675.

— mineral waters of Mont Dore, A., ii, 675.

Partheil, Alfred, and E. Amort, arsenic compounds, A., ii, 417.

Partheil, Alfred, E. Amort, and A. Gronover, hexalkylated diarsonium compounds, A., i, 474.

Passon, Max, composition of the insoluble portion of basic slag, A., ii, 514.
Passy, Jacques, oil of petit grain, A., i, 65.
Pasternack, R. See August Michaelis.

Pastor, J. See Alfred Werner.
Pastureau, combination of phenylhydrazine with metallic salts, A., i, 205.

combination of phenylhydrazine with sodium hydrogen sulphite, A., i, 807.

Patein, Gustave, estimation of proteids in blood serum, A., ii, 827.

Patein, Gustave, and E. Dufau, the sugar in diabetic urine, A., ii, 375.

Paterno, Emmanuele, and Ugo Alvisi, reactions of metallic fluorides, A., ii, 17.

reactions of fluoro- and fluoroxy-

salts, A., ii, 18.
Pattinson, Hugh Salvin. See John Pat-

tinson.

Pattinson, John, and Hugh Salvin Pattinson, separation and estimation of arsenic, A., ii, 56.

estimation of tin in commercial

antimony, A., ii, 62.

Paul, Victor, 1-ethylphthalazine and some derivatives of phthalazone, A., i, 776.

Pauly, Hermann, condensation of cyclic acetone bases with mercaptans; exceptions to the rule of mercaptole formation, A., i, 228.

Pauly, Hermann, and Joseph Rossbach, formation of pyrroline and pyrrolidone derivatives from triacetonamine. I., A., i, 773.

Pavy, Frederick William, effects on blood and urine of the intravenous and subcutaneous injection of various carbohydrates, A., ii, 677.

Paweck, Heinrich, electrolytic estima-

tion of zinc, A., ii, 250.

Pawlewski, Bronislaw, conversion of phenylcarbamine and phenylthiocarbimide into acetanilide, A., i, 594.

--- determinations of solubility at different temperatures, A., ii, 405.

Peachey, Stanley John. See William J. Pope.

Péchard, E., oxidising action of alkali periodates, A., ii, 477.

action of iodine on alkalis. A..

action of iodine on alkalis, A., ii, 593.

Pechmann, Hans von, diazomethane and nitroso-acidamides, A., i, 134.

— pyrazole from acetylene and diazomethane, A., i, 232.

--- condensation of glutaconic acid, A., i, 869.

Pechmann, Hans von, and Eugen Seel, condensation of diazomethane with quinones, A., i, 947.

Peckham, Stephen Farnum, technical analysis of asphaltum and asphalts, A., ii, 63.

Pécoul, Adrien. See Félix Marboutin.

Pélabon, *H*., action of hydrogen on silver sulphide, A., ii, 24.

dissociation of mercuric oxide, A., ii, 423.

Pellizzari, Guido, preparation of hydrazides and their transformation products, A., i, 858.

Pellizzari, Gwido, and A. A. Ferro, action of phosphorus pentasulphide on phenylurazole and paratolylurazole, A., i, 550.

Pembray, Marcus Seymour, temperature of the mouth after exercise, A., ii. 309.

Pembrey, Marcus Seymour, and B. A. Nicol, temperature of the human body, A., ii, 163.

Pemsel, Wilhelm. See Karl Spiro. Penfield, Samuel L., and H. W. Foote, composition of tourmaline, A., ii, 304. Penfield, Samuel Lewis, and Charles

H. Warren, composition of parisite from Montana, A., ii, 600.

Peratoner, Alberto, and G. Leonardi, pyrone group. V. Action of iodic acid on pyromeconic acid, A., i, 421.

Perkin, Arthur George, a reaction of some phenolic colouring matters, T.,

433; P., 1899, 65.

- the colouring matter of cotton flowers, Gossypium herbaceum. Note on rottlerin, T., 825; P., 1899, 161.
— scoparin, P., 1899, 123.

Perkin, Arthur George, and Frederick George Newbury, the colouring matter contained in dyer's broom (Genista and tinctoria) and heather (Calli rulgaris), T., 830; P., 1899, 179. (Calluna

Perkin, William Henry, jun., oxidation of sulphocamphylic acid, T., 175.

Perkin, William Henry, jun., and Charles H. G. Sprankling, β-aldehydopropionic acid,

CHO·CH₂·CH₂·COOH, and β-aldehydoisobutyric acid, CHO·CH₂·CH(CH₃)·COOH,

T., 11; P., 1898, 112.

Perkin, William Henry, jun., and Josefyn Field Thorpe, \$\beta\$-dimethyl-glutaric acid and its derivatives; synthesis of cis- and trans-caronic acids, T., 48; P., 1898, 107.

- synthesis of αββ-trimethylglutaric acid,

COOH·CH(CH₃)·C(CH₃)₂·CH₂·COOH, T., 61; P., 1898, 250.

- experiments on the constitution of isocamphoronic acid, T., 897; P., 1899, 184.

Perkin, William Henry, jun. See Harold Allden Auden, H. C. H. Carpenter, William Gilbody, and Frederick H. Lees.

Perot, A. See Ch. Fabry. Perraud, J. See $L\acute{e}o$ Vignon

Pesci, Leone, compounds of mercury with organic bases, A., i, 430.

mercuriphenyl sulphide and thio-

sulphate, A., i, 816.

- replacement of several hydrogen atoms in benzene by means of mercury, A., i, 908.

- action of acetanilide on mercury

acetate, A., i, 908.

mercury derivatives of nitrogen compounds, A., ii, 750.

Peter, Arnold H., preparation of mixed ethers, A., i, 558.

Peterkin, James Dysart. See Harold Baily Dixon.

Petermann, E. See Theodor Zincke. Peters, Franz, the ferric chloride test

for phenol, A., ii, 340.

Petersen, Emil, modifications of common galvanic cells, A., ii, 346.

Petersen, Johannes, marekanite-obsidian from Nicaragua, A., ii, 38.

Peterson, Heinrich, volumetric estimation of gold and platinum, A., ii, 253.

Petit, Paul, dextrins of saccharification, A., i, 559.

Petkow, Nicolaus. See Rudolph Fittig. Petrén, Jakob, the so-called valleriite, A., ii, 759.

Petrenko-Kritschenko, Pavel Iw., tetrahydropyrone compounds, A., i, 440.

Petrenko-Kritschenko, Pavel Iw., and S. Rosenzweig, hydroxylamine derivatives of tetrahydropyrone compounds, A., i, 706.

Petry, Eugen, chemistry of malignant tumours, A., ii, 568.

Pettit, J. H., minimum boiling points and vapour compositions, A., ii, 632.

Pfeiffer, Otto, preparation of pure silver, A., ii, 366.

Pfeiffer. $\lceil Franz \rceil$ WilhelmTheodor[Christian], explanation of denitrifica-tion and of the diminution of crops after the application of fresh farmyard manure, A., ii, 450.

· adulteration of butter, A., ii, 823.

Pfeiffer, Theodor, E. Franke, Otto Lemmermann, and H. Schillbach, action of organic nitrogen, especially in farmyard manure, A., ii, 378.

Pfüger, Eduard [Friedrich Wilhelm],

estimation of glycogen, A., ii, 529,

819.

- influence of inanition on the glycogen of the animal body, A., ii, 604.

Pflüger, Eduard, and Joseph Nerking, estimation of glycogen, A., ii, 819.

Phelps, Isaac K. See Henry Barker Hill.

Philippe, E. See Emil Fromm.

Philippi, E., formation of dolomite in

the Alps, A., ii, 306.

Phillips, Francis C., lubricants for glass stopcocks, A., ii, 16.

occurrence of hydrogen sulphide in the natural gas of Point Abino, Canada. Estimation of sulphur in gas mixtures, A., ii, 35.

Phillips, Percy Phillip. See Raphael Meldola.

Phinney, J. I. See Charles Loring Jackson.

Phisalix, C., echidnase, A., ii, 782.

Piccini, Augusto, vanadium compounds of the type VX₂, A., ii, 297.

- cæsium manganese alum, A., ii, 367. - Mendeléeff's periodic system of the elements and the new constituents of the atmosphere, A., ii, 645.

Piccini, Augusto, and N. Brizzi, vanadium compounds corresponding with

the sesquioxide, A., ii, 297.

Piccinini, Antonio, action of alkylic iodides on a-methylindole in alkaline media, A., i, 74.

preparation and properties of pentamethyldihydroquinoline from indoles,

A., i, 76.

constitution of hydroquinolines

from indoles, A., i, 76.

action of ethylic diazoacetate on pyrroline, 1-methylpyrroline, and some indoles, A., i, 823.

- constitution of the alkaloids of the pomegranate, A., i, 829, 964.

Piccinini, Antonio, and G. Camozzi, behaviour of dihydro-a-methylindole on reduction with methylic iodide, A.,

Piccinini, Antonio, and A. Quartaroli, methylgranatylamines, A., i, 965.

Pichard, P., presence of manganese in minerals, plants, and animals, A., ii, 40. forms and conditions under which

chlorine is usually taken up by plants, A., ii, 788.

Pictet, Amé, and G. Sussdorff, derivatives of nicotinic acid, A., i, 164.

Pierron, Paul, electrolytic reduction of aliphatic nitro-derivatives, A., i, 844. · electrolysis of ammonium thiosulphate, A., ii, 587.

Pierron, Paul. See also A. Daniel.

Pieverling, von, distinctions between mercuric cyanide and oxycyanide, A., ii, 698.

· mercuric oxycyanide, A., ii, 698. Pillet, Louis. See Eugène Charabot.

Pinner, Adolf, chemistry of the atropine alkaloids, A., i, 177.

Pinnow, Johannes, nitrations with nitrous acid, A., i, 203.

 preparation of pure tertiary anilines and tetralkylated aromatic diamines, A., i, 588.

- preparation of a-dinitrodimethyl-

aniline, A., i, 684.

Pinnow, Johannes, and A. Matcovitch, regularities of substitution in the formation of azo-colouring matters, A.,

Pinnow, Johannes, and Paul R. Oesterreich, action of ammonium sulphide on nitrated aromatic nitramines and nitrosamines, A., i, 202.

VOL. LXXVI. ii.

Pinnow, Johannes, and Carl Sämann, oxidation of alkyl haloids of benzimidazoles, A., i, 943.

Pinnow, Johannes, and F. Wiskott, substantive azo-dyes of the benzimid-

azole series, A., i, 500. Pissarjewsky, L. See Petr G. Melikoff. William. See Thomas Pitkeathly, Purdie

Pitsch, M. See August Michaelis.

Pitt, Arthur Ernest. See John Theodore Hewitt.

Piutti, Arnaldo, a colour reaction of wood, A., ii, 340.

Plancher, Giuseppe, action of alkylic iodide on indoles: action of ethylic iodide on 2'-methylindole (methylketole), A., i, 450.

 action of alkylic iodides on indoles : 1':3'-dimethyl-3'-ethyl-2'-methylenindoline, A., i, 452.

- action of alkylic iodides on indoles: action of methylic iodide on 2'-phenylindole, A., i, 453.

 action of alkylic iodide on indoles : action of nitrous acid on 2'-methyl-3':3'-diethylindolenine, A., i, 453. -synthesis of the bases formed by

the methylation of indole, A., i, 454. Plancher, Giuseppe, and D. Bettinelli, constitution of bases formed by the action of alkylic iodides on indoles,

A., i, 455.

- action of alkylic iodides on indoles: 2': 3': 3'-trimethylindolenine, A., i, 543. **Plathan**, A., isomorphous forms of cal-

cium, strontium, barium, and lead formates, A., i, 253.

Platner, Gastav, neutralisation, solution, and electrolysis, A., ii, 628.

Platsch, Max. See Arthur Rosenheim. Plöchl, Josef. See Wilhelm von Miller. Pochettino, A., dissociation of nitric peroxide, A., ii, 729.

Pocklington, ammonium amalgam, A., ii, 200.

Podladtschikoff, M., chloranhydride of allylphosphorous acid, A., i, 859.

Poehl, Alexandre, a relation between intraorganic oxidations, and the production of kinetic energy in the organism, A., ii, 502.

Pogorželsky, S., derivatives of di-isocrotonyl and di-isobutenyl, A., i, 785. Polacci, Egidio, modification of the thalleioquinine test, A., ii, 391.

Polenske, Eduard, estimation of sugar in meat and urine, A., ii, 186.

Polenske, Eduard, and Walter Busse, commercial varieties of maté, A., ii, 608.

Polidori, E., hydrate of titanium trichloride, A., ii, 295.

Pollard, William. See Charles Thomas Clough.

Pollok, James Holms, the thermal effects of dilution, P., 1899, 8.

Pommerehne, Herbert, salts of hydrazoic acid with some organic bases, A.,

preparation of hydroxysuccinic acid (a-isomalic acid) from pyruvic acid, A., i, 574.

-damascenine, a constituent of the of Nigella damascena, i. 964.

Ponsot, A., osmotic researches with dilute solutions of cane-sugar, A., ii. 204.

- osmotic measurements, A., ii, 357. - cryoscopic measurements,

ii, 546, 728.

- direct measurement of the osmotic pressures of very dilute solutions of sodium chloride, A., ii, 591.

— cryohydrates, A., ii, 634.

Ponzio, Giacomo, a ketopseudonitrile, A., i, 667.

 oxidation of hydrazoximes. II., III. and IV., A., i, 717, 827.

Ponzio, Giacomo, and Ausonio De Gaspari, action of nitrous acid on aliphatic ketones, A., i, 252.

 transformation of ketones into diketones. IV., A., i, 860.

Ponzio, Giacomo, and O. Prandi, acetylcaproyl [methyl amyl diketone], A., i, 253.

Ponzio, Giacomo. See Michele Fileti. Pope, William Jackson, crystalline form of iodoform, T., 46; P., 1898, 219.

– a method of studying polymorphism, and on polymorphism as the cause of some thermal peculiarities of chloral

hydrate, T., 455.

the application of powerful optically active acids to the resolution of externally compensated basic substances. Resolution of racemic camphoroxime, T., 1105; P., 1899, 199.

· dextro-ac-tetrahydro-β-naphthylamine, P., 1899, 170.

Pope, William J., and Alfred William Harvey, homogeneity of dextrol@voa-phenethylamine dextrocamphorsulphonate, T., 1110; P., 1899, 200.

Pope, William J., and Stanley John Peachey, the application of powerful optically active acids to the resolution of externally compensated basic substances. Resolution of tetra-hydroquinaldine, T., 1066; P., 1899, Pope, William J., and Stanley John Peachey, method of discriminating between "non-racemic" and "racemic" liquids, T., 1111; P., 1899, 201.

 asymmetric optically active nitrogen compounds. Dextro- and lævobenzylphenylallylmethylammonium iodides and bromides, T., 1127; P., 1899, 192; discussion, P., 192.

Pope, William J., and Edmund Milton Rich, the application of powerful optically active acids to the resolution of externally compensated basic sub-Resolution of tetrahydroparatoluquinaldine, T., 1093; P., **1899**, 200.

William Jackson.

Frederic Stanley Kipping.

Popper, Miss O. See Gabriel Gustavson. Porcher, Ch., analysis of the pulmonary ossifications of "Entèque," A., ii, 568.

Portner, Eduard. See Theodor Curtius. Posner, Theodor, disulphones. I. Nitrogen derivatives of sulphonal, A., i, 604. Possetto, Giovanni, apparatus for the

rapid estimation of fat in soap, and of Hehner's number, A., ii, 72.

Pouget, Isidore, metallic thioantimonites, A., ii, 663.

 volumetric estimation of zinc, A., ii, 695.

Pouget, Isidore. See also Jaques Cavalier.

Poulsson, E., Aspidium spinulosum, A., i. 379.

Pouret, cryoscopic examination of butter

and margarine, A., ii, 710.

Pouret, Ch. See A. Mouneyrat.

Prandi, O. See Giacomo Ponzio.

Julius Howard, occurrence, origin, and composition of chromite, A., ii, 494.

- formation of corundum in magmas, A., ii, 758.

Pratt, Julius Howard. See also William Earl Hidden.

Pregl. See Zdenko H. Skraup.

Pregl, Fritz, simple addition to the apparatus for Kjeldahl's nitrogen estimation, A., ii, 382.

- the cause of the high value of the C/N quotient in normal urine, A., ii, 440.

Preis, Karl, analyses of Bohemian minerals, A., ii, 668.

Prentice. See Ludwig Gattermann.

Prescott, Albert B., and Harry Mann Gordin, periodides of certain alkaloids and the volumetric estimation of alkaloids as higher periodides, A., i, 89.

Prescott, Albert B. See also Harry Mann Gordin, William H. Hess.

Preuss. See Heinrich Ritthausen.

Prianischnikoff, Dmitri N., relative value of mineral phosphates, A., ii, 514. - mutual relations of the decomposition of albumin and of respiration, A., ii, 787.

Prianischnikoff, Dmitri N., and S. M. Kouznezoff, effect of nitrate on the development of barley, A., ii, 513.

Přibram, Richard, and Georg Gregor, estimation of the alkalis in urine, A.,

Price, Thomas Slater, reaction between potassium persulphate and potassium iodide; catalysis in the same reaction, A., ii, 147.

Prinsen-Geerligs, H. C., action of neutral salts on glucose at higher

temperatures, A., i, 101.

- inversion of [cane] sugar by neutral salts in presence of glucose, A., i, 101. Prior, George Thurland, minerals from Swaziland; "æschynite"

Hittero, A., ii, 433. - rocks from Antarctic regions, A.,

ii, 436. Prior, George T. See G. F. Herbert

Smith, Leonard J. Spencer.

Pritzkow, W. See Paul Duden.

Prochazka, John, and H. N. Herman, estimation of small amounts of a-naphthol in commercial \$\beta\$-naphthol, A., ii, 65.

Procter, Henry Richardson, the refractive constant in oil and fat analysis,

A., ii, 258.

Procter, Henry Richardson, and J. Gordon Parker, standard methods for the sampling and analysis of tanning materials, A., ii, 75.

Pröscher, Fr., constitution of the proteid molecule, A., i, 653.

Prud'homme, Maurice, new method for transforming paranitrodiamidotriphenylmethane into rosanilines or their leuco-bases, A., i, 217.

-ammonium hyposulphites, A., ii, 554. Prunier, [L.] Léon [A.], action of iodine

on sulphur, A., ii, 650.

Prussia, L., cyanide of mercury, A., i, 318.

 mercuriomethacetin and mercurioa-acenaphthalide, A., i, 361.

 organomercuric compounds of diphenylamine, A., i, 361.

Przibylla, Carl, metallic triple nitrites, A., ii, 222.

Puckner, William August, standardisation of volumetric acid and alkali, A., ii, 610.

Pugliese, Angelo, influence of organic foods on inorganic metabolism, A., ii, 40.

See Reinhold Pulawski, Th. von. Walther.

Pulfrich, Carl, laboratory sodium burner, A., ii, 148.

Purdie, Thomas, and James C. Irvine, the rotatory powers of optically active methoxy- and ethoxy-propionic acids prepared from active lactic acid, T., 483; P., **1899**, 74.

Purdie, Thomas, and William Pitkeathly, production of optically active mono- and di-alkyloxysuccinic acids from malic and tartaric acids, T., 153; P., 1899, 6.

Puriewitsch, Konstantin A., decomposition of glucosides by the action of

moulds, A., ii, 683.

 respiration of mould fungi in different nutritive solutions, A., ii, 785.

Q.

Quartaroli, A. See Antonio Piccinini. Quedenfeldt, Erwin.See TheodorCurtius.

R.

Rabaut, Ch., action of cuprous chloride on nitriles, A., i, 557.

Rabe, Paul, three cases of desmotropism. A., i, 289.

Rachford, Benjamin Knox, diastatic action of pancreatic juice, A., ii, 567.

Radcliffe, L. G. See Leo Marchlewski. Rademacher, Ferd. See Friedrich Kehrmann.

Radziewanowski, Cornelius, and Julian Schramm, influence of light on chemical substitution, A., i, 197.

Raikow, P. N., flash points of organic compounds, A., i, 847.

- use of a solution of phloroglucinolvanillin for the detection of halogens in organic compounds, A., ii, 52.

- examination of otto of roses, A.,

ii, 63, 130.

 application of phloroglucinol-vanillin for the detection of sulphur and nitrogen in organic substances, A., ii, 123.

- presence of chlorinated organic compounds, and absence of sulphur compounds, in cotton seed oil, A., ii, 824.

Wilhelm, and A. Zilliacus, Ramsay, monazite from Finland, A., ii, 562.

Ramsay, William, the newly discovered gases and their relation to the periodic law, A., ii, 211.

---- densities of 'atmospheric nitrogen,' pure nitrogen, and argon, A., ii, 745.

Ramsay, William, and Morris W. Travers, homogeneity of helium, A., ii, 22.

——— fergusonite, an endothermic mineral, A., ii, 35.

— preparation, and some of the properties, of pure argon, A., ii, 746. Ransom, F. See W. G. Ruppel.

Raoult, Francois Marie, exact cryometry: application to aqueous solutions, A., ii, 203.

cryoscopic measurements, A., ii, 590. Rapp, F. See Karl Auwers.

Rapp, Rudolph. See Eduard Buchner, Hans Buchner.

Raschig, Fritz, hydroxylamine, A., ii, 285.

Rasetti, Giovanni Emilio, cynarasin, A., i, 395.

Rathjen, A. See Paul Jannasch.

Raušar, J. Z., cinnabar ores in Servia, A., ii, 667.

Ravinson, M. See Friedrich Kehrmann. Rawitsch, A., qualitative analysis without the use of hydrogen sulphide, A., ii, 578.

Rawson, Christopher, testing indigo: a yellow colouring compound found in

Java indigo, A., ii, 620.

Rây, Prafulla Chandra, on the interaction of mercurous and mercuric nitrites with the nitrites of silver and sodium, P., 1899, 103.

sodium, P., 1899, 103.

Ray, W. E., T. S. McDermott, and Graham Lusk, phosphorus poisoning and phloridzin diabetes, A., ii, 783.

Rayleigh, John William Strutt (Baron), character of the impurity found in nitrogen gas derived from urea, A., ii, 744.

Raýman, Bohuslav, and Ottokar Šulc, inversion of saccharose by water, A., i, 102.

Rebuffat, Orazio, constitution of hydraulic cements, A., ii, 289.

Recchi, V. See G. Ampola.

Recoura, Albert, chromosulphochromic acid, A., ii, 226.

action of alkali sulphates on chromic salts, A., ii, 369.

--- chromic acetate, A., ii, 661.

--- isomeric modification of chromic acetate, A., ii, 662, 663.

Reden, Ulrich von. See Carl Bülow.

Reeb, Moritz, cheiranthin, an active constituent of the wallflower, A., i, 378.

Reed, Lester, rapid estimation of small quantities of free phosphorus in phosphorus paste, A., ii, 451.

Reese, Charles L., action of chromic acid on hydrogen, A., ii, 647.

Reformatsky, Sergius N., preparation and properties of β-hydroxy-aα₁-dimethylglutaric acid, A., i, 481.

----- action of zinc and ethylic chloracetate on ethylic formate: synthesis of alkylic trimesates, A., i, 516.

Reibenschuh, Anton Franz, mineral water from Radein, Styria, A., ii, 308.

Reichard, C., action of sodium metarsenite on metallic salts, A., ii, 23.

— volumetric estimation of mercury by sodium arsenite in alkaline solution, A., ii, 183.

volumetric estimation of lead dioxide by an alkaline solution of arsenious acid, A., ii, 333.

--- volumetric estimation of bismuth by alkaline arsenite, A., ii, 386.

volumetric estimation of manganese in manganetes by an alkaline solution of arsenious acid, A., ii, 813.

Reid, E. Emmet, hydrolysis of acid amides, A., i, 507.

valuation of "saccharin," A., ii, 581.

Reid, Edward Waymouth, intestinal absorption, A., ii, 775.

Reinders, W., and W. E. Ringer, aromatic nitro-compounds: substitution of nitro-groups by methoxyl and ethoxyl, A., i, 893.

ethoxyl, A., i, 893.

Reinecke, E. See Emil Knoevenagel.

Reisch, R., isomeric change in [the formation of] homologues of phloroglucinol, A., i, 803.

Reissert, Arnold. See A. König. Reitmair, Otto. See Frank W. Dafert,

Emerich Meissl.

Reitter, Hans, reduction of aconic acid to paraconic acid, A., i, 115.

Reitzenstein, Fritz, ammonia and pyridine salts and hydrates of bivalent metals, A., i, 160.

the various theories relating to the constitution of the ammonio-metallic salts, A., ii, 95.

Remsen, Ira, hydrolysis of acid amides, A., i, 507.

Rémy, Theodor, potash requirements of brewery barley, A., ii, 795.

— importance of chemical analysis in estimating the value of hops, A., ii, 796.

Renault, Albert, reduction of calcium phosphate by the carbon of the electric arc, A., ii, 419.

Reusz, Friedrich von, influence of experimental jaundice on the glycogen

of liver and muscle, A., ii, 168. Reuter, Max, titration of combined sulphuric acid, A., ii, 53.

Revay, N., electrolytic separation of copper from silver, mercury, and arsenic, A., ii, 126.

Reverdin, Frédéric, and Franz Düring, chlorophenetidines, bromophenetidines, and nitrophenetidines, and azocolouring matters derived therefrom, A., i, 266.

Reychler, Albert, derivatives of anisaldehyde, A., i, 54.

--- coumarin, A., i, 56.

 sulphonic derivatives of camphor, A., i, 445.

 osmotic pressure and cryoscopy, A., ii. 357.

Reychler, Albert. See S. Baude, R. Goldschmidt.

Reynaud, Georges. See Maurice Hanriot; Alexandre **Hébert**.

Rey-Pailhade, Joseph de, existence of the proteid radicle suggested by Bertrand in the oxydases, A., i, 180.

Rheineck, H., formula of tourmaline, A., ii, 601.

Riban, Joseph, apparatus for electrolysis, A., ii, 543.

- estimation of hydrogen phosphide in mixtures of gases, A., ii, 612.

Ricca-Rosellini, E. See C. Manuelli. Rich, Edmund Milton. See Willia See William Jackson Pope.

Richards, Theodore William, dehydration of crystalline salts, A., ii, 8.

- cause of the retention and release of gases occluded by metallic oxides, A., ii, 100.

— spectra of hydrogen, A., ii, 266. - an electric drying oven, ii, 592.

Richards, Theodore W. and Gregory Paul Baxter, atomic weight of cobalt, A., ii, 753.

Richards, Theodore W., and Jesse Briggs Churchill, transition points of complex systems as fixed points in thermometry, A., ii, 354.

Richards, Theodore W., and Allerton S. Cushman, atomic weight of nickel, A., ii. 488.

Richards. Theodore W., and Henry Burnell Faber, solubility of silver bromide and chloride in sodium thiosulphate solutions, A., ii, 288.

Richards, Theodore W., Clarence Mc. C. Gordon, L. J. Henderson, and Wentworth Lewis Harrington, boiling points of mixed solutions, A., ii, 140.

Richards, Theodore W., and Gilbert N. Lewis, electrochemical and thermochemical properties of zinc and cadmium amalgams, A., ii, 267.

Richardson, Frederic William, and Adolf Jaffé, estimation of glycerol, A., ii, 64.

Richaud, A., detection and estimation of bromoform, A., ii, 527.

Richmond, Henry Droop, an automatic burette, A., ii, 450.

 estimation of alcohol and ether in the presence of light petroleum, A.,

- composition of milk and milk products, A., ii, 707.

Richmond, Henry Droop, and F. R. O'Shaughnessy, examination of commercial amylic alcohol, A., ii, 579.

- possible source of error in modifications of the Leffmann-Beam method for the estimation of fat in milk, A., ii, 708.

Richmond, Henry Droop, and C. H.
Rosier, estimation of fat in milk using light petroleum as solvent, A., ii, 708.

Richter, L., nitrogen nutrition of plants, A., ii, 237.

Ridder, G. de. See Ludwig Gattermann. Ridewood, H. E. See Leonard Hill.

Riegler, E., delicate test for ammonia, ammonium salts, and nitrogenous compounds which readily yield ammonia, A., ii, 180.

- detection of albumin and albumoses in animal liquids, A., ii, 264.

Rigaut, Albert. See William Robert Lang.

Righi, E. de. See C. Manuelli.

Rijn, J. J. L. van, apparatus for producing a current of warm water of constant temperature, A., ii, 362.

 varying composition of butter, A., ii, 822.

Rijn, Willem van, stereoisomerism in piperazine and ethylenediamine derivatives, A., i, 77, 166.

Rimatori, C. See G. Ampola.

Rimbach, Eberhard, optical resolution

and properties of mandelic acid, A., i, 895.

- changes of rotation of active electrolytes in dilute solutions, A., ii, 345.

Rimini, Enrico, a colour reaction of vinylic alcohol, A., i, 787. acetylthiophenone [acetamidothio-

phen], A., i, 872.

estimation of hydrazine, A., ii, 576.

Rinckenberger, A. See ArthurHantzsch.

Ringer, W. E., orthomethoxybenzonitrile and orthethoxybenzonitrile, A., i, 893.

Ringer, W. E. See also W. Reinders. Ripper, Maximilian, chemistry and analysis of wine, A., ii, 699.

Rissom, Johannes. See Theodor Curtius.

Ritter, E. See Louis Duparc.

Ritthausen, [Carl] Heinrich [Leopold], composition of vicin, A., i, 715.

— divicin, A., i, 715.

— solubility of proteids in glycerol, A., i, 724.

--- proteids of wheat gluten, A., i, 724.

Ritthausen, [Carl] Heinrich [Leopold], and Preuss, composition of the convicins obtained from the seeds of the vetch and of Vicia faba, A., i, 715.

Riva, Carlo, dyke rocks from Adamello

mtns., A., ii, 38.

Rivals, Paul, thermochemical researches on chlorinated derivatives of the acetic, benzoic, and salicylic series, A., ii, 204.

Rivals, Paul. See Marcel Delépine.

Rizzo, Niccoló, orthophenylthiohydantoic acid, A., i, 53.

Robinson, Clarence J., occurrence of acetaldehyde in petroleum products, A., i, 665.

Robson, W. G. See J. P. Kuenen.

Roca, E., molecular interchanges between soluble salts, A., ii, 358.

Rocques, Xavier, volumetric estimation of formaldehyde, A., ii, 189.

— preparation of a titrated solution of acetaldehyde, A., ii, 531.

Röder, Paul. See Carl Graebe.

Röhmann, Franz, products of the trypsin fermentation of casein, A., i, 96.

Röhmann, Franz, and Franz Steinitz, estimation of iron in organic matter, A., ii, 814.

Röhmer, Hans. See August Michaelis. Rölofsen, J. A. See Ludwig Gattermann.

Rösel, Robert, absorption of iodine oils, A., ii, 775.

Rössler, Oscar, [discrimination of amber from copal. Test for arsenic in carpets], A., ii, 530.

Rössner, Heinrich. See Johannes

Rogers, Austin F., cupro-goslarite, a new variety of zinc sulphate, A., i, 667. Rogers, Roy Ravone. See F. G.

Cottrell.

Rogoysky, Casimir V., conservation of the nitrogen of farmyard manure, A., ii, 512.

Rohland, Paul, solution pressure of some haloid salts, A., ii, 144.

-- some reactions in methylic alcohol and acetone, A., ii, 144.

— hydration of calcium oxide, A., ii, 596.

--- chromic chloride, A., ii, 599.

Roland, A. See Girolamo Mazzara.

Rolants, fermentation of Barbary figs, A., ii, 784.

Rolfe, George W., and W. A. Faxon, exact estimation of total carbohydrates in acid-hydrolysed starch products, A., ii, 188.

Rongger, N., constituents of the seeds of *Picea excelsa*. Products of the decomposition of the proteids of the seeds, A., ii, 241.

Rongger, N. See also Ernst Schulze.

Roos, Ernst, chemistry of the thyroid gland, A., ii, 232, 779.

Roozeboom, Hendrik Willem Bakhuis, solubility and melting point as criteria for racemic compounds, pseudoracemic mixtures and inactive conglomerates, A., ii, 276, 401.

—— solidification of liquid mixtures of tautomeric compounds, A., ii, 355.

recognition of racemic compounds,
 A., ii, 732.

Roques, Ferdinand, cinchonicine, A., i, 177.

Rosauer, Otto, separation of the dimethylic ethers of pyrogallol and of methylpyrogallol, A., i, 346.

Rose, J. L. See Harold A. Auden.
Rose-Innes, J., and Sydney Young,
thermal properties of normal pentane,

A., ii, 587.

Rosellini. See Ricca-Rosellini. Rosenberg. See Schaar-Rosenberg.

Rosenbusch [Karl] Harry [Ferdinand], origin of glaucophane rocks, A., ii, 601. Rosenheim, Arthur, new aspirator, A.,

ii, 552.
Rosenheim, Arthur [with Herman Itzig,

Ivan Koppel, and Max Platsch], action of acidic metallic oxides on organic acids, A., i, 739.

Rosenheim, Arthur, and Otto Liebknecht, iodic and periodic acids, A., ii, 743.

Rosenheim, Arthur [with Hermann Lienau, Karl Bierbrauer, and Max Platsch], action of inorganic acidic metallic oxídes on organic acids, A., i, 569.

Rosenheim, Arthur, and Theodor A.

Maass, pyridine compounds of quadrivalent palladium, A., i, 163.

Rosenheim, Arthur, and Edward A. Sasserath, osmium, A., ii, 664.

Rosenheim, Otto, and Philip Schidrowitz, note on the optical activity of gallotannic acid, P., 1899, 67.

Rosenstiehl, Auguste, wines obtained by heating the grape, A., ii, 508.

Rosenzweig. See Albert Ladenburg. Rosenzweig, S. See Pavel I. Petrenko-Kritschenko.

Roshanowitsch, K. See J. Godlewsky. Rosier, C. H. See Henry Droop Rich-

Rosin, Heinrich, proteoses in urine, A., ii, 42.

Rossbach, Joseph. See Hermann Pauly. Rosset, G., determination of molecular weights from the dissociation pressures of gaseous hydrates, A., ii, 548.

Rossi, U. See Giacomo Carrara.

Rota, A., angles of contact between the crystal faces of alum and its saturated solution, A., ii, 473.

Rota, A. G., method for testing natural and artificial organic colours, ii, 135.

Roth, Wilhelm, electrical conductivity of animal fluids, A., ii, 311.

Rougy, Marius, new coloured phenyl-

hydrazones, A., i, 752.

Rousset, L., action of ethyloxalic chloride [ethylic chloroglyoxylate] on diphenyl in presence of aluminium chloride, A., i, 291.

- application of Perkin's reaction to some aldehydes of the naphthalene

series, A., i, 296. action of ethyloxalic chloride [ethylic chloroglyoxylate] on a-ethoxynaphthalene in presence of aluminium chloride, A., i, 297.

Roux, E. See Léon Maquenne.

Roux, Gabriel, an oxydase, secreted by Bacillus coli, which can produce pigments, A., ii, 444.

Rovaart, H. van de. See Karl Auwers. Rożycki, A. See Stanislaus von Kostanecki.

Różycki, L., tertiary dibutylpyrogallol, A., i, 880.

Rubénovitch, E., action of hydrogen phosphide on copper and its compounds, A., ii, 102, 652, 749.

Rubner, Max, and Otto Hubner, artificial nutrition of a normal, and of an atrophic, infant, A., ii, 775.

Rudewitsch, Wladimir. See Wladimir B. Markownikoff.

Rücker. K. See Alfred Werner.

Rümpler, A., peptone in sugar-beet juices, A., ii, 507.

Rüst, Carl. See Friedrich Kehrmann. Ruff, Otto, d- and r-arabinose, A., i, 324. - hydroxygluconic acid, A., i, 869.

Ruff, Otto, preparation of monobasic acids of the sugar group, A., i, 869.

Ruhemann, Siegfried, the action of ammonia on ethereal salts of organic acids, T., 245; P., 1899, 6.

formation of α-pyrone compounds and their transformation into pyridine derivatives, T., 411; P., 1899, 55.

Ruhemann, Siegfried, and Alfred Valen-Cunnington, condensation of ethylic salts of acids of the acetylene series with ketonic compounds, T., 778 ; P., **1889**, 169.

- studies of acids of the acetylene series, T., 954; P., 1899, 185.

Ruhemann, Siegfried, and H. E. Stapleton, tetrazoline, T., 1131; P., 1899, 192; discussion, P., 192.

Rundqvist, Carl, allyl substituted carbamides and thiocarbamides, A., i, 16. Rupe, Hans, cineolic acid, A., i, 340.

Rupe, Hans, and Hans Labhardt, unsymmetrical phenylhydrazine deriva-V. Ethylic phenylhydrazidotives. formate, A., i, 356.

Rupe, Hans, and J. Leontéeff, condensation of nitrobenzaldehyde with gallacetophenone, A., i, 371.

Ruppel, W. G., chemistry of tubercle bacilli, A., ii, 237.

Ruppel, W. G., and F. Ransom, molecular relations of solutions of tetanus poison, A., ii, 443.

Russell, Edward John. See Harold Baily Dixon.

Russell, William James, hydrogen peroxide as the active agent in producing pictures on a photographic plate in the dark, A., ii, 720.

Russwurm, Karl. See Hans Stobbe. Rutley, Frank. See James Park.

Ryan, Hugh, synthetical preparation of glucosides, T., 1054; P., 1899, 196.
Rydlewski, N., behaviour of raw sugar when stored, A., ii, 48.

Sabanéeff, Alexander [and in part E. Dengin and A. Speransky], inorganic hydrazine salts and the preparation of hydrogen nitride, A., ii, 364.

Sabatier, Paul, basic silver-copper salts. A., ii, 654.

Paul, and Jean Baptiste Sabatier, Senderens, hydrogenation of acetylene in presence of nickel, A., i, 555.

Sabbatani, Luigi. See B. Bergesio. Sablon. See Leclerc du Sablon. Sacerdote, Paul. See Daniel Berthelot. Sacharoff, N. action of enzymes and substances which kill bacteria, A., ii, 786.

Sachs, A., pyridine derivatives from ethylic methylacetoacetate, A., i, 302.

Sachs, Franz, condensation products from flavinduline and deoxybenzoin, A., i, 239.

--- condensation of phthalimide with formaldehyde, A., i, 280.

Sachs, Franz. See also Paul Ehrlich.
Sämann, Carl. See Johannes Pinnow.
Sagrahin W. vologity constants in the

Sagrebin, W., velocity constants in the formation of simple ethers, A., ii, 735.

Saillet, detection of urobilin in urine, A., ii, 459.

Saint-Hilare, Constantin, microchemical reactions, A., ii, 133.

Salaskin, Sergei, and J. Zaleski, estimation of urea, A., ii, 825.

Salcher, Richard M. See Heinrich Goldschmidt.

Salis, R. von. See Stanislaus von Kostanecki.

Salkind, J., action of alkalis on chloroketones and chloralcohols, A., i, 733.

Salkowski, Ernst [Leopold], a slow proteid decomposition, A., i, 724.

influence of carbolydrates on the putrefaction of proteids, A., i, 724.
 influence of hydrogen sulphide on carbonic oxide blood, A., i, 784.

action of superheated water on pro-

teids, A., ii, 374.

formation of scatoleacetic acid during the putrefaction of proteids, A., ii, 567.

the first product of the gastric digestion of casein, A., ii, 567.

pentoses in the urine, Λ., ii, 679.
 estimation of oxalic acid in urine, Λ., ii, 705.

—— antiseptic action of salicylaldehyde and benzoic anhydride, A., ii, 786.

Salkowski, Heinrich [Hermann]. See Wilhelm Hittorf.

Salomon, Georg [Anton]. See Martin Krüger.

Salvadori, Roberto, electromotive force of some concentration batteries and of a copper zinc battery with organic solvents, Λ., ii, 721.

Salvadori, Roberto. See also Raffaele Nasini.

Samson, E. See Rubin Blank.

Samtleben, A, perbromides of some cyclic acetone bases, A., i, 542.

Samuel, Ernst. See Otto Manasse.
Sandsten, Emil P., influence of gases and vapours on the growth of plants, A., ii, 320.

Saposchnikoff, L., synthesis of parisopropylphenylhydroxypivalic acid, Λ., i, 896.

Sargent, George William, and John Kirk Faust, a new filtering medium, A., ii, 516.

Sasserath, Edward A. See Arthur Rosenheim.

Saunders, A. P., preparation of hydrogen arsenide, A., ii, 286.

Saunders, A. P. See also Wilhelm Meyerhoffer.

Saurel, Paul, demonstration of the phase rule, A., ii, 406.

Scala, Alberto, rancidity of fats, A., i, 478.

Scarpitti, Nino, Piutti's reagent for alkaloids, A., ii, 344.

Schaar-Rosenberg, F. See Armin Fischer, Ludwig Gattermann.

Schäfer, Edward Albert, and Swale Vincent, physiological effects of intravenous injection of extracts of the pituitary body, A., ii, 441, 782.

Schaefer, George L., a new test for cocaine, A., ii, 715.

Schäfer, Joh., analysis of raw materials containing tartaric acid, A., ii, 70.

Schaer, Eduard, guaiacol test for blood, A., ii, 195.

Schall, [Joh. Friedrich] Carl, Weith's polymeric carbodiphenylimide, A., i, 280.

---- electrolytic decomposition of orthonitrobenzoic acid, A., i, 364.

constitution of brazilin, A., i, 539.
 internal friction of solutions of ethereal salts in superfused thymol, A., ii, 640.

Schall, Carl, and R. Klein, electrolytic formation of nitrobenzene from orthonitrobenzoic acid, A., i, 425.
Schall, Carl, and S. Kraszler, electro-

Schall, Carl, and S. Kraszler, electrolytic preparation of dithion bisulphides, A., i, 414.

Schaposchnikoff, W. G., azonium chromogens. II., Λ., i, 431.

azonium chromogens. III. Ethylnaphthaphenazonium and its derivatives, A., i, 505.

Scharizer, Rudolf, constitution and genesis of iron sulphates, A., ii, 30.

Schatz. See Carl Adam Bischoff. Schaum, Karl, hylotropic isomeri

forms, A., ii, 733.

Scheffler, W. See Walther Hempel. Scheij, L. T. C. [synthesis of normal ethereal salts of glycerol and fatty acids], A., i, 667. Scheitz, P. See Wilhelm von Miller. Schenck, Rudolf, crystalline liquids, A., ii, 360.

Schenck, Rudolf, and Fr. Schneider, crystalline liquids, A., ii, 637.

Schenke, V., two simple methods for estimating carbonic anhydride in quicklime, limestone, animal charcoal, marls and soils, A., ii, 809.

W. Schepper, D. Yssel de.Augustin Bistrzycki.

Schestakoff, P. J. See Al. A. Shukoff. Schidrowitz, Philip. See Otto Rosen-

Schieffer, Heinrich. See Friedrich Heusler.

Schiff, Hugo, polyaspartic acids, A., i, 195. - methyleneasparagine, A., i, 870.

Schiff, Hago [and in part Giulio Marzichi and Vieri Sevieri], polyaspartic acids, A., i, 674.

Schiff, Robert, isomeric forms of ethylic benzylidenebisacetoacetate, A., i, 366. Schillbach, H. See Theodor Pfeiffer.

Schiller, Nicolai N., significance of osmotic pressure in the thermodynamics of solutions, A., ii, 357.

Schilling, Rudolf von, and Daniel Vorländer, electrolytic conductivity of hydroresorcinols and 5-ketonic acids, A., i, 878.

Schilling, Rudolf von. See also Daniel Vorländer.

Schiloff, Nikolai, catalytic action in the oxidation of hydrogen iodide by bromic acid, A., ii, 147.

Schimmel and Co., ethereal oils, A., i, 63, 298, 923.

Schirmacher, Carl. See Rudolph Fittig. Schlagdenhauffen, Charles Frédéric, and Pagel, estimation of carbonic oxide, A., ii, 384.

the flame of hydrogen, A., ii, 475.

Schleussner, Karl. See Johannes Thiele. Schliebs, G., and H. Minssen, changes in the surface and sub-soil of peat-land under the influence of cultivation and manure, A., ii, 571.

Schlinck, Julius, pyrrolidine, A., i, 539. Schloesing, Th., jun., phosphoric acid dissolved by the water in soils, A., A., ii, 119.

- nitrification in soils, A., ii, 175.
- utilisation by plants of the phosphoric acid dissolved by the water of the soil, A., ii, 243.

- action of very dilute acids on phosphates in soil, A., ii, 449.

Schlossberg, S. See Carl Liebermann. Schlosser, W., estimation of sugar in urine, A., ii, 185.

Schlumberger, Ernest, "condensed" metallic hydroxides, A., ii, 596.

Schmidt, Ernst [Albert], ketonic bases, A., i, 4.

 $-\psi$ -carbamides, Λ ., i, 16.

gelsemic acid, A., i, 72. Schmidt, Ernst, and Wilhelm Goehlich, action of chloracetone on quinoline and allied bases, A., i, 232.

Schmidt, Ernst, Augusta Jassoy, and P. Haensel, peucedanin and oreoselone, A., i, 377.

Schmidt, Ernst, and Daniel Knuttel, pyridylacetonyl chloride and acetonylpiperidine, A., i, 228.

Schmidt, Gerhard Carl. See Eilhard Wiedemann.

Schmidt, Julius, isomeric benzoylacetoximes, A., i, 206.

hneider, Felix, pars phenylamine, A., i, 499. Schneider, paradihydroxydi-

Schneider, Fr. See Rudolf Schenck.

Schneider, Leopold, estimation of lead in lead ores, A., ii, 250.

Schneider, Max, action of chlorine on homologues of phloroglucinol, A., i, 679.

Schneider, R., bismuth suboxide, A., ii, 227.

W., Schneidewind, assimilation nitrates and the effect of different nitrates, A., ii, 49.

Schneidewind, W. See also W. Krüger. Schoeller, August, potential difference between amalgams and solutions, A., ii, 346.:

Schöndorff, Bernhard, urea in the animal organism and in normal mammalian muscle. Urea in various animal fluids. Formation of urea in the liver, A., ii, 373.

Scholl, Hermann, changes of silver iodide in light and the Daguerreotype process, A., ii, 621.

Scholl, Roland. See Eugen Bamberger. Scholtz, Max, bebeerine and buxine, A., i, 92.

- reaction of alkaloids with orthoxylylenic bromide, A., i, 648.

 pelosine, A., i, 651. --- conversion of unsaturated ketoximes

into pyridine derivatives. II., A., i, 717.

- retardation of chemical reactions due to stereochemical causes, A., i, 881. - estimation of alkaloids by means

of standard iodine solution, A., ii, 390. - estimation of alkaloids by iodine

solution, A., ii, 584.

Scholtz, Max, and P. Friemehlt, action of αδ-dibromopentane on primary and secondary bases, A., i, 541.

Schoorl, N., iodometric estimation of sugar by means of Fehling's solution, A., ii, 617.

Schou, C. V. See C. C. L. G. Budde.

Schramm, Julian. See CorneliusRadziewanowski.

Schreber, K., the theory of osmotic pressure, A., ii, 273.Schreiber and Waldvogel, excretion of

uric acid, A., ii, 780.

Schreiber, C., and F. Zetsche, testing oil of turpentine for mineral oils, A., ii, 815.

Schreinemakers, Frans Antoon Hubert, equilibrium in the system, waterphenol-aniline, A., ii, 739. Schreiner, Oswald. See Louis Kahlen-

berg, Louis Kremers.

Schröder, K., potassium ferrocyanide as a source of iron in the volumetric analysis of iron, A., ii, 814.

Schröder. See also Stahl-Schröder.

Schröder van der Kolk, J. L. C., microscopic examination of crystals, A., ii, 16.

Schroeter, Georg, chemistry of acetylene, A., i, 119.

Schrötter, Hugo, the albumoses of Witte's peptone, A., i, 316.

Schryver, Samuel Barnett, preparation of acid phenylic salts of dibasic acids, T., 661; P., 1899, 121; discussion, P., 122. - new method for the analysis of

commercial phenols, A., ii, 700. Schükareff, A., electrolytic potential,

A., ii, 722.

Schüle, Adolf, composition of normal gastric juice, A., ii, 40.

Schüler, Georg, occurrence of chromic oxide in Algerian phosphates, A., ii, 335. Schümann, M. See Arthur Hantzsch. Alfred. See Schürenberg,

Knoevenagel. Schützenberger, Paul, and Octave Boudouard, yttria earths contained in monazite sands, A., ii, 367.

Schulle, B., employment of maize cake for feeding cows, A., ii, 609.

Schulten, August [Benjamin (Baron)] de, artificial production of lautarite, A., ii, 161.

- artificial formation of lanarkite, A., ii, 161.

Schultze, Herman S., conductivity of fused.zinc chloride, A., ii, 623.

 electrolysis of fused zinc chloride, A., ii, 657.

Schulz, Friedrich N., metabolism in inanition, A., ii, 773.

Schulz, Friedrich N., and O. Falk, excretion of phosphoric acid after castration, A., ii, 504.

Schulz, Julius. See Hans Stobbe.

Schulze, Bernhard, maize oilcake for milch cows, A., ii, 448.

- digestibility of various new foods and the changes produced in them when superheated, A., ii, 509.

- investigations of soils, A., ii, 510. Schulze, Ernst, decomposition of proteid

in plants, A. ii, 240.

- influence of carbohydrates on the formation of proteid in plants, A., ii, 322.

--- distribution and functions of cane sugar in plants, A., ii, 570.

Schulze, Ernst, and N. Rongger, constituents of the seeds of Pinus cembra, A., ii, 242.

Schulze, Ernst, and Ernst Winterstein, constitution of ornithine and arginine, A., i, 107

Schunck, C. A., a photographic investigation of the absorption spectra of chlorophyll and its derivatives in the violet and ultra-violet regions of the spectrum, A., ii, 540.

Schurig, fate of hæmoglobin in the or-

ganism, A., ii, 167.
Schuyten, M. C., double sulphates of metals and antipyrine, A,, i, 306.

Schwartz, David. See Arthur A. Noyes. Schwartz, Rudolf, weighing corrosive or

fuming liquids, A., ii, 802.

— estimation of boric anhydride in boracite, A., ii, 808. Schwarz, B. See Karl Elbs.

Schwarz, Heinrich P. See Martin Freund.

Schwarz, Leo, oxidation of acetone and homologous fatty ketones [in the organism], A., ii, 40.

- formation of urea from oxamic acid in the organism, A., ii, 165.

Schwarz, Ph. See Theodor Zincke. Schweitzer, C., glucoside containing caffeine and theobromine obtained from plants, A., i, 300.

Schwinge, Wilhelm, the number of red and colourless corpuscles, and amount of hæmoglobin at different ages in man, A., ii, 166.

Scott, A. P. See H. T. Barnes. Scudder, H. See S. P. Mulliken See S. P. Mulliken.

Sebelien, John, manurial experiments

with flowers, A., ii, 511. Seel, Eugen. See Hans von Pechmann.

Seelhorst, Conrad von. See M. Tucker, Johannes Wilms. See Herm. Baum. Seeliger, Richard.

Seemann, John, reducing substances obtained from egg-albumin, A., i, 465.

Seeman, John. See also Friedrich Müller. Seemann, L. See Ludwig Vanino.

Seidel, Johannes, iodine substitution products of some aromatic alcohols, aldehydes, and acids, A., i, 597.

Seidel, Johannes. See also Walther Hempel.

Seidel, O., benzoyl derivatives of acetonitrile and paratoluoylacetonitrile, A., i, 138.

Seidensticker, J. See Arthur A. Noyes. Seissl, Josef, solubility of the phosphoric acid of surface and subsoil, A., ii, 798.

Seitz, E. See Friedrich Bullnheimer. Seitz, W. See Richard Abegg.

William James, and Frederick Sell, William Dootson, the chlorine derivatives of pyridine. Part III. Interaction of chlorine and pyridine hydro-

chloride, T., 979; P., 1899, 187. Sell, William James, and Henry Jackson, synthesis of some derivatives of ββ-dipyridyl from citrazinic acid, T.,

507; P., **1899**, 98.

Semenoff, Basil A., conversion of alkylic dibromacetoacetates into mesaconic acid and its homologues, A., i, 791.

— homologues of mesaconic, cit aconic and itaconic acids, A., i, 793. citr-

- formation of β-bromalkylsuccinic acids by addition of hydrogen bromide to homologues of citraconic acid, A., i, 865.

- influence of an excess of sodium carbonate on the decomposition of β-bromalkylsuccinic acids, A., i, 866. - influence of excess of sodium carbonate on the decomposition of dibromocitrapyrotartaric acid, A., i, 867.

Sementschenko, A. A. See Nicolai A. Kurnakoff.

Friedrich Wilhelm, citral Semmler, (geranial) and lemon grass oil, A., i, 223.

Semmler, Friedrich Wilhelm. dinand Tiemann.

estimation of the Sempolowski, L., quality of sugar-beet, A., ii, 388.

Senderens, Jean Baptiste, new soluble antimonic acid and its salts, ii, 557.

Senderens, Jean Baptiste. See also Paul Sabatier.

Sernoff, Wladimir, derivatives of hexahydrometatoluicacid (1:3-methylcyclohexanecarboxylic acid), A., i, 422.

- bromohexahydro-orthotoluic acid and its derivatives, A., i, 583.

Sestini, Fausto, formation of furfuraldehyde from starch and its derivatives, A., i, 103.

 nitrogenous substances accompanying humic acid in the soil, A., Sestini, Fausto, decomposition of feldspar rocks by roots, A., ii, 798.

Sestini, Fausto, and R. Campani, analysis of the mineral water of Castrocaro, A., ii, 38.

Seubert, Karl. See Hans Landolt. Sevieri, Vieri. See Hugo Schiff.

Seyda, Anton, notes [tannin: iron in water : zinc iodide-starch solution], A., ii, 341.

 toxicological processes for detecting alkaloids, A., ii, 343.

Seyewetz, Alphonse. See Auguste Lumière.

Seyfried, E. von, [augite] from Kreuzberg, Rhön Mtns., A., ii, 162.

Seyler, H. See Heinrich Limpricht. Shengle, John C., and Edgar F. Smith, precipitation of copper by zinc, A., ii, 749.

Shepherd, J. W. See William Albert Noyes.

Shimer, Porter W., silica and insoluble residue in Portland cement, ii, 520.

- carbon combustions in a platinum crucible, A., ii, 694.

Shiver, F. R., estimation of potassium as perchlorate, A., ii, 521.

Shorey, Edmund C., glycollic acid in the sugar cane, A., ii, 507.

Shrapnel-Smith, Edward. See Max Muspratt.

Shukoff, Al. A., determination of the solidifying point, A., ii, 588.

Shukoff, Al. A., and P. J. Schestakoff, analysis of bone fats, A., ii, 191.

Sicherer, Walther von. See Richard Willstätter.

Sidersky, D., colorimetric estimation of invert sugar, A., ii, 254.

Sieber, Wilhelm. See Wilhelm Miller.

Siegfried, K., syntheses of phenyltribromomethylcarbinol, A., i, 747.

Siegfried, Max., antipeptones, A.,i, 784. Sieverts, Adolf. See Otto Wallach.

Sieverts, R. See Otto Wallach.

Sigmond, Alexius von, velocity of hydrolysis of maltose, A., ii, 146.

Silber, Paul G. See Giacomo L. Ciami cian.

Simon, Louis, new colour reaction for phenylhydrazine, A., ii, 133.

Simoncelli, Guido, Piutti's reagent for alkaloids [iodised parethoxyphenylsuccinimide], A., ii, 344.

Simonis, Hugo, condensation of mandelic acid with β -naphthol, resorcinol, and orcinol, A., i, 154.

preparation of mucobromic and mucochloric acids, A., i, 741.

Simonis, Huqo.See also Augustin Bistrzycki.

Simonowitsch, L., preparation of organozinc compounds and synthesis of hexane, A., i, 871.

Simons, Frank D., action of certain substances on digestive ferments, A., ii. 164.

Simons, Frank D. See also Charles Albert Crampton.

Simonsen, E., manufacture of ethylic alcohol from sawdust, A., i, 471.

Sinnhold, Hugo, lichenostearic acid, A.,

- amount of nicotine in retail cigars and tobacco, A., ii, 48.

Siringo, Giuseppe, estimation of hydrochloric acid in the stomach contents, A., ii, 803.

Sisley, Paul, condensation of "saccharin" with phenols, A., i, 289.

Siviter, Arthur B. See Russell H. Chittenden.

Sjögren, [Sten Anders] Hjalmar, composition of retzian, A., ii, 35.

- kainosite from the Ko mine, Sweden, A., ii, 36. - formation of manganosite and peri-

clase, A., ii, 760.

Sjöström, O., analysis of meteoric irons, A., ii, 674.

Sjollema, B., a derivative of d-glucosamine, A., i, 732.

- perchlorate in Chili saltpetre, A., ii, 513.

Skertchly, William Pearson. See Otto Hehner.

See Alfred Werner. Skiba, W.

Skirrow, Frederick William. See Julius Berend Cohen.

Skraup, Zdenko Hanns, acetylation with the help of sulphuric acid, A., i, 112. isomerism in the cinchonine group,

A., i, 960.

- molecular transformations: transformation of cinchonine into a-isocinchonine, A., i, 961. Skraup, Zdenko H. [with Hugo Ham-

burger and Pregl], cellulose and starch, A., i, 852.

Slagle, Robert L., double halogen salts of tin with aniline and the toluidines, A., i, 39.

Kazimir, constitution of Slawinski, terpenes and allied compounds, A., i, 529.

See also Georg Slawinski, Kazimir. Wagner.

Sleen, G. van der, vinylglycollic (a-hydroxybutenoic) acid, A., i, 864.

Smetham, Alfred, iodine absorption of commercial tallow, A., ii, 710.

Smith, Alexander, phenylhydrazones of benzoin, A., i, 909.

Smith, Andrew. See W. Carrick Anderson. Smith, Carl E., testing formaldehyde,

A., ii, 188. Smith, Edgar Francis. See Clarence Ebaugh, Arnott R. Foster, D. C. Hanna, John C. Shengle, and Raymond W. Tunnell.

Smith, Frank Warren, analysis of dynamite and gelatin dynamite, A., ii, 528.

Smith, George Frederic Herbert [and George T. Prior], lead minerals from Laurion: paralaurionite, A., ii, 432.

Smith, Harry Metcalfe. See Norman Leonard.

Smith, Joseph Kent, technical method for the direct estimation of nitrogen in illuminating and other gases with-out the aid of "gas analysis apparatus," A., ii, 575.

Smith, James Lorrain, pathological effects due to increase of oxygen ten-

sion, A., ii, 316.

Smith. See also Shrapnel-Smith.

Smithells, Arthur, Harry M. Dawson, and Harold A. Wilson, electrical conductivity and luminosity of flames containing vaporised salts, A., ii, 722.

Snape, Henry Lloyd, and Arthur Brooke, an isomeride of amarine, T., 208; P.,

1899, 22.

Snell, J. F., potassium chloride in aqueous acetone, A., ii, 407.

Snyder, Harry, production of humus from manures, A., ii, 48.

Snyder, Harry. See also Arthur Goss. Sobolewski. See Carl A. Bischoff. Soch, Charles A., benzilorthocarboxylic

acid, A., i, 216. fractional crystallisation,

ii, 84. Soden, Hugo von, and Fr. Müller, con-

stituents of East Indian sandal-wood oil, A., i, 924. Söldner, Friedrich. See William

Camerer. Soldaini, Arturo and E. Bertè, calcium

citrate and its analysis, A., ii, 820. Sollman, Torald. See George N. Stewart. Solonina, Basil M., action of nitrosyl chloride on fatty amines. I. Primary II. Secondary amines, monamines. A., i, 473.

 action of nitrosyl chloride on fatty amines: III. Primary diamines, A.,

i, 561. · action of aqua regia on fatty primary amines, A., i, 663.

action of sodium phenoxide on the dibromo-derivatives of hydrocarbons, A., i, 681.

Solonina, Basil M., relationship between the melting points of organic substances and the number of carbon atoms in the molecule, A., ii, 633.

Soltsien, Paul, detection of sesamé oil in butter or margarine, A., ii, 71. - Halphen's test for cotton seed oil,

A., ii, 823.

Sommerlad, Hermann, preparation of thioantimonites and thioarsenites of silver, copper and lead by a dry method, A., ii, 215.

Son, A. F. P. van, derivatives of tropine,

A., i, 311.

Sonn, S., apparatus for estimating total solids and fat in milk, A., ii, 709.

Sonstadt, Edward, note on the action of light on platinum, gold, and silver, P., 1898, 179.

Sostegni, Livio, a phlobaphen from grape seeds, A., ii, 446.

Spalteholz, Werner, estimation phenols in disinfectants in the presence of soap, A., ii, 64.

Spanjer. See Paessler.

Specketer, H., quantitative electrolytic separation of chlorine, bromine, and iodine, A., ii, 123.

Spencer, Leonard James, diaphorite from Washington and Mexico, A., ii, 108.

Spencer, Leonard James [and George T. **Prior**], plagionite, heteromorphite, and semseyite, A., ii, 431.

Speransky, A. See Alexander Sabanéeff.

Speyers, Clarence Livingston, osmotic pressure, A., ii, 9.

- molecular weight of liquids, A., ii, 145, 468.

Spezia, Giorgio, quartz and opal, A., ii, 300.

Spica, Matteo, and F. Angelico, 3'-nitroso-

indoles, A., i, 938. Spica, Matteo. See also Angelo Angeli. Spiegel, Leopold, alkaloids from Yohimbe bark, A., i, 966.

Spiegelberg, H., uric acid infarcts in new-born children, A., ii, 778.

Spielfogel, M. See Paul Friedländer. Spiller, Edward. See Erastus Hopkins. **Spindler**, O., estimation of iodine in bismuth iodides, A., ii, 245.

 volumetric estimation of bismuth, A., ii, 252.

Spiro, Karl, glycocine, A., ii, 777.

Spiro, Karl, and Wilhelm Pemsel, the basic and acid capacity of the blood and of proteids, A., ii, 230.

Spitzer, Wilhelm, conversion of nuclein bases into uric acid by the action of oxygen on tissue extracts, A., ii, 604.

Spivey, W. T. Newton. See Thomas Barlow Wood.

Sprankling, Charles H. G. See William Arthur Bone; William H. Perkin,

Spring, Walthère, cause of the absence of colour in certain limpid natural waters, A., ii, 228.

- the blue colour of water, A., ii, 475.

- optically transparent liquids, A., ii, 537.

- rôle of iron compounds, and of humic substances in the coloration of water: separation of these substances under the influence of sunlight, A., ii, 570.

diffusion of light by solutions, A., ii, 585.

Spruck, W. See Alfred Werner.

Spüller, Josef, a rapid Eggertz process, A., ii, 809.

Squibb, Edward R., assay of nux vomica, A., ii, 535.

Staedel, Wilhelm, density and molecular weight of ozone, A., ii, 150.

Stahl-Schröder, M., the rôle of sodium in plants, A., ii, 789.
Stapleton, H. E. See Siegfried Ruhe-

mann.

Starck, Wilhelm, the ions of dilute sulphuric acid, A., ii, 625.

Stark, J., coagulation of colloidal solutions, A., ii, 644.

Starke, Paul, orthazoxyanisoil, orthazo-anisoil and orthohydrazoanisoil, and dianisidines, A., i, 589. Starkweather, G. P., specific volumes

and thermodynamic relations of steam: Regnault's calorie, A., ii, 270.

Staudenmaier, Ludwig, preparation of graphitic acid. II., A., ii, 481.

Stavenhagen, Alfred, tungsten, A., ii, 489.

Stead, John Edward, lead-antimony, tin-antimony, tin-arsenic, and tinphosphorus alloys, A., ii, 32.

Stebbins, James H., action of sulphuric acid on thymol, A., i, 604.

- action of diazonium salts on thymolsulphonic acid, A., i, 916.

Steel, Thomas, red rain dust, A., ii, 674.

See David Orme Masson. Steele, D. B. Steele, L. T. See H. F. Hunt.

Stefanowski. See Carl Adam Bischoff. Steffeck, H., and Max Maercker, efficacy

of various manures, A., ii, 177. Steger, Alphonse, velocity of substitution of a nitro-group in ortho- and para-

dinitrobenzene by alcohol, i, 745.

Steger, Alphonse. See also Cornelis A. Lobry de Bruyn.

Steiger, George, solubility of natural silicates in water, A., ii, 496.

Steinbrenk, Adolf. See Paul Jacobson. Steindler, Leo, estimation of organic acids in urine. A., ii, 704.

acids in urine, A., ii, 704. Steiner, Ernst. See Rudolf Hefelmann.

Steinfels, Wilhelm, protection of standard solutions, A., ii, 380.

Steinitz, Franz. See Franz Röhmann. Steinitzer, Fritz. See Alfred Werner. Steinwehr, H. von. See Friedrich Wilhelm Küster.

Stelzner, Alfred Wilhelm, origin of the Freiberg mineral veins, A., ii, 107.Stephan, Karl, conversion of linalool

into terpineol (m.p. 35°), A., i, 68.

—— conversion of geraniol into terpineol (m.p. 35°), A., i, 920.

Stern, Alfred. See Max Busch.

Stern, Arthur Landauer, the nutrition of yeart. Part I., T., 201; P., 1898, 182.

Stern, Hermann. See Carl Paal. Sternberg, Wilhelm, taste in relation to chemical composition, A., ii, 772.

Stevens, Henry Potter. See William D. Chattaway.

Stewart George Neil, relative volume, or weight, of blood corpuscles and plasma, A., ii, 603.

effect of removal of the proteid on the molecular concentration and electrical conductivity of muscle extracts, A., ii, 680.

Stewart, George N., and Torald Soll-man, proteids of muscle, A., ii, 680.

Stieglitz, Julius, constitution of salts of imido-ethers and other carbimide derivatives, A., i, 359.

Stieglitz, Julius, and Ralph H. McKee, preparation of alkylisocarbamides from cyanamides, A., i, 594.

Stiehl, Wilhelm, lemon-grass oil, A., i, 66.

the three aldehydes of oil of lemongrass, A., i, 711.

Stiehl, Wilhelm. See also Otto Wallach.
Stiepel, Julius. See Richard Anschütz.
Stift, Anton, röle of pentosans in the manufacture of crudesugar, A., i, 185.

effect of formaldehyde on the germination of sugar beet seed, A., ii, 44.

Stift, Anton. See also K. Komers.

Stillmann, John Mason, and R. E. Swain, cryoscopic depression and latent heat of fusion of naphthylamine and diphenylamine, A., ii, 728.

Stobbe, Hans, synthesis of unsaturated dicarboxylic acids from ketones and diethylic succinate, A., i, 900.

Stebbe, Hans [and in part Georg Heun], condensation of acetophenone with diethylic succinate, A., i, 901.

Stobbe, Hans [and in part Paul Kohlmann and Max Noetzel], condensation of benzophenone with diethylic succinate, A., i, 900.

Stobbe, Hans, and Karl Russwurm, condensation of deoxybenzoin with diethylic succinate, A., i, 902.

Stobbe, Hans, Karl Russwurm, and Julius Schulz, condensation of dibenzyl ketone with diethylic succinate, A., i, 903.

Stockman, Ralph, and E. D. W. Greig, action of arsenic on bone marrow and blood, A., ii, 167.

Stöber, F., burettes and separating

funnels, A., ii, 552.

Stoeder, Willem, separation of brucine from strychnine, A., ii, 715.

Stoermer, Richard, formation of condensed nuclei with para-linkings, A.,

Stoermer, Richard [with Kurt Dragendorff, and Paul Hoffmann], action of nitrous acid on secondary aromatic amines, A., i, 42.

Stokes, Alfred Walter, automatic burettes, A., ii, 450.

Stokes, Henry N., metaphosphimic acids. III., A., ii, 93.

Stokes, Henry N. See also Henry W. Turner.

Stoklasa, Julius, physiological meaning of phosphoric acid in the organism of the sugar beet, A., ii, 45.

— physiological importance of arsenic in vegetation, A., ii, 323.

— physiological importance of furfuroids in sugar beet, A., ii, 792.

Stollé, Robert, acetyl derivatives of hydrazine, A., i, 413.

— salts of benzylidenehydrazinesulphonic acid, A., i, 430.

— conversion of secondary acid hydrazides into derivatives of furodiazole, pyrrodiazole and thiodiazole, A., i, 456.

—— diphenylcarbamideoxime, A., i, 885. Stone, Winthrop E., and H. E. Wright, taka-diastase, A., i, 95.

Stoney, Gerald, quantity of oxygen in the atmosphere compared with that in the earth's crust, A., ii, 593.

Storch, V., chemical method of ascertaining whether milk or cream has been heated to at least 80°, A., ii, 75.

Stortenbeker, Willem, electrolytic separation of cadmium and iron, A., ii, 126.

Stramer, W. See Max Busch.

Strasser, H. See Victor Merz.

Straub, Walther, influence of sodium chloride on proteid metabolism, A., ii, 372.

Stritar, Milan Josef, condensation product from isobutaldehyde and benzaldehyde, A., i, 889.

Strübe, Hermann. See Paul Jacobson. Strzyzowski, Casimir, persulphate as a reagent for the detection of albumin in urine, A., ii, 459.

Stubenrauch, Ludwig von, chemical behaviour of iodoform and its detection in aqueous solutions, A., i, 398.
Stuber, Emil. See Rudolph Fittig.

Studer, Arthur. See Adolf Liebmann. Studer, B., detection of acetone in urine, A., ii, 190.

Stutzer, Albert, and R. Hartleb, decomposition of cement by bacteria, A., ii, 505.

Suais, action of tetramethyldiamidobenzhydrol on para- and meta-sulphanilic acids, A., i, 58.

— malachite-green-orthosulphonic acid, A., i, 439.

Sudborough, John Joseph, apparatus for heating sealed tubes at a constant temperature, A., ii, 552.

Sudborough, John Joseph, and Lorenzo L. Lloyd, etherification constants of substituted acetic acids, T., 467; P., 1899, 2.

Sudborough, John Joseph. See also Lorenzo L. Lloyd.

Sulc, Ottokar, catalytic action of metals on solutions of oxalic acid, A., i, 569.
— volatilisation of osmium as tetroxide in a current of air or oxygen, A., ii, 299.

Šulc, Ottokar. See also Bohuslav Rayman. Sullivan, Eugene C., some iodine compounds, A., ii, 398.

Sundmacher, W. See Richard E. Meyer.

Sundvik, Ernst Edvard, wax of the humble bee, A., i, 112.

— xanthine bases from uric acid, A., i, 174.

Sussdorff, G. See Amé Pictet.

Sutherland, William, latent heat of evaporation of zinc and cadmium, A., ii, 7.

Sutherst, W. F. See Friedrich Kehrmann.

Suzuki, U., formation of proteids and the assimilation of nitrates by phænogams in the absence of light, A., ii, 323. Suzuki, U., a proteid compound of arginine, A., ii, 793.

Swain, R. E. See John Mason Stillmann. Swan, J. N., some double halogen salts of mercury, A., i, 38.

Swarts, Frédéric, fluorine derivatives of toluene, A., i, 197.

 fluorodibromacetic acid, A., i, 254.
 chlorobromo-derivatives containing two atoms of carbon, A., i, 725.

— oxidation of halogen-substituted derivatives of ethylene, A., i, 734.

Swaving, A. J., injurious effect of sea water on soil, A., ii, 510.

Swinter on Soll, A., II, 510. Swinter, Ralph S., quantitative separa-

tion of halogens, A., ii, 122. Swirski, G., absorption and excretion of iron in the guinea pig, A., ii, 373.

Sykes, Walter John, and H. Neville Hussey, diastase, A., i, 313.

Szádeczky, Julius, chloritoid from Hungary, A., ii, 497.

Szarvasy, Emerique C., and Carl Messinger, a new compound of arsenic and tellurium, T., 597, P. 1899, 123.

Szolayski, B. See Eugen Bamberger.
Sztankay, Aba von, composition of diuretin, A., i, 240.

T.

Tacke, Bruno, action of Bremen poudrette on sandy soil, A., ii, 690.

Täuber, Ernst. See Ludwig Hantower.
Tafel, Julius. See Thomas B. Baillie,
Wolfgang Brendler, and Nicola
Moufgang.

Taff, Joseph A., albertite-like asphalt from Indian territory, U.S.A., A., ii, 756.

Tambor, Josef. See T. Emilewicz; Stanislaus von Kostanecki.

Tammann, Gustav, vapour pressure of hydrated crystals, A., ii, 8.

viscosity of undercooled liquids, A., ii, 272.

velocity of crystallisation. II. and III., A., ii, 272, 548.

pressure variation of the latent heat of fusion, A., ii, 399.

ii, 635.

Tammann, Gustav. See also A. Bogojawlensky.

Tanatar, Simeon M., conversion of trimethylene into propylene, A., i, 422, 657.

hydroxylamine, A., ii, 285, 415.
action of hydrogen peroxide on halogen oxy-acids, A., ii, 414.
metaphosphoric acids, A., ii, 416.

Tanatar. Simeon M., formation of azoimide, A., ii, 479.

- percarbonates, A., ii, 482.

— perborates, A., ii, 553.

glucosamine [chi-Charles, Tanret, tosamine] hydrochloride, A., i, 246.

glucosines, A., i, 246.

- action of dilute nitric, sulphuric, hydrochloric, and phosphoric acids on nitrates in the presence of ether, A., ii, 21.

-action of ammonium salts on Aspergillus niger, A., ii, 170.

- fungi, A., ii, 171.

Tapia, F. J., essential oil of caparrapi, A., i, 533.

Taraschtschansky. See Carl Adam Bischoff.

Tarugi, N., calcium carbide as a reducing agent in analysis in the dry way, A., ii, 749.

Tassilly, Eugène, some properties of caffeine, A., i, 174.

 estimation of caffeine in coffee, A., ii, 134.

basic and ammoniacal metallic halogen salts, A., ii, 747.

Taylor, W. W., freezing points of aqueous solutions of sodium mellitate, A., ii, 7.

Teall, Jethro Justinian Harris, differentiation in igneous magmas as a result of progressive crystallisation, ĭi, 162.

Teall, J. J. Harris. See also Edwin Tulley Newton.

Tebb, M. Christine, chemistry of reticular fibre, A., ii, 312.

Teclu, Nicolae, magnet-radiometer, A., ii, 77.

Teodoresco, E. C., and Henri Coupin, influence of anæsthetics on the formation of chlorophyll in plants, A., ii, 239.

Termier, Pierre, zoisite from the Alps, A., ii, 303.

-tachylyte from the floor of the North Atlantic, A., ii, 436, 501.

Tétry, Léon [Alexandre], diphenylanthranone derivatives, A., i, 818.

Tetzlaff. See Ludwig Gattermann. Thaddéeff, Konstantin. See Andreas Arzruni.

Thal, R., clay from Russia, A., ii, 769. Thayer, E. F., boiling point curve for

benzene and alcohol, A., ii, 140. - boiling point curves, A., ii, 402.

Theodor. See Albert Ladenburg. See Friedrich Wilhelm Thiel, A. Küster.

Thiele, Johannes, silver derivatives of guanidine, A., i, 7.

Thiele, Johannes, preparation of amido-

guanidine, A., i, 7.

azo- and hydrazo-compounds of tetrazole, A., i, 170.

- condensation products of phenyl-isocrotonic acid: isomeric lactones of γ-ketonic acids, A., i, 216.

theory of unsaturated and of aromatic compounds, A., i, 554.

- condensation of nitromethane with

aromatic aldehydes, A., i, 584.

— condensation of phenylisocrotonic acid with pyrocinchonic anhydride, A., i, 601.

- reduction of benzil, A., i, 609.

- dibenzylidenepropionic acid and phenacylcinnamic acid, A., i, 609. isomeric diphenylcrotonolactones,

A., i, 612.

- hydrocinnamoin, A., i, 616.

- constitution of benzene, A., i, 873. Thiele, Johannes, and James Bailey, action of semicarbazide on formaldehyde, A., i, 109.

- hydrazine derivatives of pro-

pionic acid, A., i, 169.

Thiele, Johannes, and Willy Barlow, condensation of amidoguanidine and of semicarbazide with quinones, A.,

Thiele, Johannes, and Richard Bihan, condensation of amidoguanidines with aromatic aldehydes and ketones, A., i, 46.

Thiele, Johannes, and Frankland Dent, action of chloroform on aqueous alkalis, A., i, 1.

Thiele, Johannes, and Otto Dimroth, orthonitrobenzylic chloride and paranitrobenzylic chloride, A., i, 426.

Thiele, Johannes, and Eduard Dralle, condensation of amidoguanidine with aliphatic aldehydes and ketones, A.,

Thiele, Johannes, and Otto Holzinger, orthodiamidodibenzyl, A, i, 438.

Thiele, Johannes, and Wilhelm Manchot. derivatives of triazole, A., i, 167.

Thiele, Johannes, and Ernst Mayr, phenacylbromocinnamic acid, ī, 610.

 phenacylhydrocinnamic acid and the dibromide of dibenzylidenepropionic acid, A., i, 611.

Thiele, Johannes, and Jakob Meisenheimer, addition of hydrogen cyanide to ethylic cinnamylidenemalonate, A., i, 603.

reduction of dibenzylidene-propionic acid and of phenylcinnamenylacrylic acid, A., i, 614.

Thiele, Johannes, and Wilhelm Osborne, diazoamido-compounds of the fatty series, A., i, 412.

derivatives of triazan (prozan),

A., i, 413.

Thiele, Johannes, and Heinrich Rössner, the dibromide of phenylcinnamenylacrylic acid, A., i, 612.

Thiele, Johannes, and Karl Schleussner, preparation of phenylcinnamenylacrylic acid and of diphenylbutadiene, A., i, 612.

Thiele, Johannes, and Emil Uhlfelder, nitrobiuret and amidobiuret, A., i, 118.

amidodicyanodiamidine, A., i, 119.

Thiemich, Martin, fat in the liver of infants suffering from gastro-enteritis, A., ii, 234.

— the source of feetal fat. I. A., ii, 775. Thierry, Maurice de, carbonic anhydride on Mont Blanc, A., ii, 653.

Thill, J., volumetric estimation of sulphur in cast iron, steel, &c., by arsenious acid, A., ii, 693.

Thörner, Wilhelm, products of combustion of boiler fuel, A., ii, 746.

Thomas, George Edward, atomic weight of tungsten, and preparation of sodium pertungstate by means of the electric current, A., ii, 489.

Thomas, Victor, interchange of halogens in the aromatic series, A., i, 26.

chlorination by means of ferric chloride: general method for the preparation of chloriodo-derivatives, A., i, 676.

action of ferric chloride and bromide on aromatic hydrocarbons and their haloid substitution derivatives, A., i, 743.

— metallic halogen salts, A., ii, 278.
— absorption of nitric oxide by ferrous

salts, A., ii, 368, 426.
—— mixed halogen lead salts, A., ii, 420, 484, 597.

Thompson, William H., physiological effects of "peptone" when injected into the circulation, A., ii, 604, 677.

estimation of morphine in opium, A., ii, 194.

--- chemical constituents of cork, A., ii, 324.

Thomsen, [Hans Peter Jürgen] Julius, stability of solutions of hypochlorous acid in presence of alkalis, A., ii, 476.

acid in presence of alkalis, Å., ii, 476. Thorne, Leonard Temple, and E. Haynes Jeffers, estimation of moisture in invert sugar, A., ii, 51.

vol. LXXVI. ii.

Thorpe, Jocelyn Field, and William Udall, the cis- and trans-β-phenyl-butane-αα₁α₂-tricarboxylic acids, T., 904; P., 1899, 184.

Thorpe, Jocelyn Field. See F. H.

Howles, William Henry Perkin, jun.

Thron, Heinrich. See Rudolph Fittig.

Thurnlackh. See Garzanelli. Thurn.

Thurnlackh. See Garzarolli-Thurnlackh.

Tichvinsky, Mich. See Friedrich Kehrmann.

Tickle, Thomas. See John Norman Collie. Tiemann, [Johann Carl Wilhelm] Ferdinand, conversion of geraniol into methylheptenol, A., i, 184.

citropellic acid A i 190

citronellic acid, A., i, 190.
—— history of citral, A., i, 247.

—— detection and estimation of citral, A., i, 249.

- action of alkaline and acid reagents on citral, A., i, 250.

- action of semicarbazide on samples of citral purified by different methods, A., i, 250.

--- occurrence of isopulegol in commercial citronellal, A., i, 622.

--- natural citral and the composition of oil of lemon-grass, A., i, 623.

— Stiehl's three lemon-grass aldehydes, A., i, 623.

- citronellylidenecyanacetic acid, A., i, 624.

Tiemann, Ferdinand [with Paul Krüger, and Georg Lemme], hydrosulphonic acid derivatives of cinnamaldehyde, A., i, 247.

Tiemann, Ferdinand, and Friedrich Wilhelm Semmler, carvenone, A., i. 224

Tigges, Hermann. See Paul Jacobson. Timpe, H., aërometric estimation of fat in milk, A., ii, 822.

Tingle, Alfred. See John Bishop Tingle. Tingle, John Bishop, and Alfred Tingle, action of ethylic oxalate on camphor. IV., A., i, 444.

Tistschenko, Wetschiaslaw E., action of aluminium amalgam on alcohols, A., i, 408.

Todeschini, Giustiniano, distinctive reactions of tannic and gallic acids, A., ii, 341.

Tollens, Bernhard, carbohydrates of barley and malt, with special reference to the pentosans, A., ii, 174.

Tollens, Bernhard. See also O. von Faber.

Tolloczko, Stanislaw, structure of terpenes and allied compounds, A., i, 440. Tommasi, Donato, thermal equilibrium in electrolysis, A., ii, 138.

- thermochemical theory of the car-

bon cell, A., ii, 199.

principal of maximum work, A., ii, 412.

 luminous phenomenon produced by ammonium salts and fused potassium nitrite, A., ii, 483.

Torrey, Henry A., allocaffeine, A., i, 86. Torrey, Joseph, jun. See Henry Barker Hill.

Toso, P., phosphorus and arsenic in minerals of the island of Elba, A., ii, 600.

Tower, Olin Freeman, estimation of carbon and hydrogen in organic substances containing nitrogen, ii, 694.

Tower, Olin F. See Francis Benedict.

Townsend, C. O., influence of ether on germination, A., ii, 684.

Townsend, John S., diffusion of ions into gases, A., ii, 729.

Trantom, William. See Charles A. Kohn.

Traphagen, Frank W., and W. M. Cobleigh, estimation of carbohydrates, A., ii, 529.

Trasciatti, D., a new amylamine, A., i, 855.

Trasciatti, D. See also Clemente Montemartini.

Traube, Hermann, composition and crystalline form of malates, i, 484.

Traube, Wilhelm, action of cyanogen on ethylic acetoacetate and acetylacetone, A., i, 192.

Traube, Wilhelm, and E. Lehmann, a additive action of alkylenic new oxides, A., i, 417.

Travers, Morris W., origin of the gases evolved on heating mineral substances,

meteorites, &c., A., ii, 769. Travers, Morris W. See also William Ramsay.

Traverso, G. P., minerals of Sarrabus, Sardinia, A., ii, 759.

Treadwell, Frederick Pearson, calcium and magnesium hydrogen carbonates, A., ii, 220.

Treubert, F. See Ludwig Vanino.

Trevor, Joseph E., electromotive force of concentration cells, A., ii, 395.

Trey, Heinrich, detection of cadmium in presence of copper by adsorption, A., ii, 182.

Trillat, Auguste, unsymmetrical tetramethyldiamidodiphenylethane and its derivatives, A., i, 615.

Trillat, Auguste, detection and estimation of methylic alcohol in ethylic alcohol, A., ii, 130.

- estimation of gelatin in gums and food materials, A., ii, 196.

detection of methylic alcohol in spirits: presence of this alcohol in brandy from marc, A., ii, 387.

Trillat, Auguste. See also L. Alphonse

Adrian.

Troeger, Julius, and Erich Ewers, electrolysis of the sodium salts of halogensubstituted fatty acids, A., i, 12.

electrolysis of aaß-trichlorobutyric acid, A., i, 667.

Troeger, Julius, and P. Feldmann, Oleum cadi, A., i, 376.

Troeger, Julius, and Victor Hornung, action of sulphur monochloride and dichloride on sulphonates, thiosulphonates, and mercaptans, A., i, 905.

Troeger, Julius, and Robert Uhde, sulphonated butyric acids, A., i, 606.

Troeger, Julius. See also Heinrich Beckurts, Robert Otto.

Trowbridge, Perry F., quinoline perhaloids, A., i, 636.

Truffaut, Georges. See AlexandreHebert.

Tschirch, [Wilhelm Oswald] Alexander, and A. Farner, stick-lac, A., i, 446.

Tschirch, [Wilhelm Oswald] Alexander, and Halbey, olibanum, A., i, 69.

Tschirch, [Wilhelm Oswald] Alexander,

and A. Knitl, opopanax from Umbelliferæ, A., i, 713. Tschirner, Fred.

See Eugen Bamberger.

Tschernik, G., a new cerium mineral from the Caucasus, A., ii, 668.

- argon and helium in cerium minerals from the Caucasus, A., ii, 669. Tschitschkin, A. See W. Miller.

Tschugaeff, L., influence of association of liquids on their optical activity, A., ii, 3.

Tschunkew. See Carl Adam Bischoff. Tucker, George M. See Homer J. Wheeler.

Tucker, M., and Conrad von Seelhorst, effect of the amount of water and the richness of soil on the development of the roots and above-ground growth of oats, A., ii, 508.

Tuckett, Ivor Ll., pancreatic diabetes, A., ii, 676.

Tunnell, Raymond W., and Edgar F. Smith, action of hydrogen chloride on sulphates, selenates, tellurates, and phosphates, A., ii, 744.

Turner, Henry W., [mariposite], A., ii, 37.

Turner, Henry W., William F. Hille-brand, Henry N. Stokes, and William Valentine, rock-forming biotites and amphiboles, A., ii, 498.

Turner, Henry W. See also William $\emph{F.}$ Hillebrand.

Tust. See Ludwig Gattermann.

Tutton, Alfred Edwin, thermal deformation of crystallised sulphates of potassium, rubidium, and cæsium, A.,

ii, 630.

Twitchell, Ernst, sulphuric acid as a reagent in the analysis of fatty acids, A., ii, 69.

U.

William.See Jocelyn Field Udall, Thorpe.

Uedinck, August, derivatives of β-bromopropylamine, A., i, 497.

Uhde, Robert. See Julius Troeger.

Uhlenhuth, Rudolf, hydroxylamine compounds of nickel sulphate, A., ii, 661. Whifelder, Emil. See Johannes Thiele. Ullfers, Fritz. See Augustin Bistrzycki. Ulpiani, C. See G. Ampola.

Ulsch, Karl, action of tartaric acid and citric acid on metallic iron, A., i, 868.

- estimation of some inorganic and organic acids by means of the volume of hydrogen evolved on treatment with a metal, A., ii, 802.

Umbgrove, Herm., and Antoine Paul Franchimont, propylnitr-Nicholasamine and its alkylic derivatives: probable existence of a new class of neutral nitramines, A., i, 105.

Umbgrove, Herm. See Antoine P. N. Franchimont, Albin Haller.

Urbain, G., yttrium earths in monazite sands, A., ii, 28.

- nature of the didymium accompanying yttrium in monazite sands, A., ii, 424.

Urbain, G., and A. Debierne, acetylacetonates [metallic compounds of acetylacetone], A., i, 789.

٧.

Vadam, Ph., volumetric estimation of boric acid, A., ii, 56.

 oxidising enzymes from hellebore, A., ii, 683.

Vaillant, V. ctor, action of ammonia on dithioacetylacetone, A., i, 415.

-action of aniline on dithioacetylacetone, A., i, 594.

Vaillant, Victor, action of sulphur chloride on the copper derivative of benzoylacetone, A., i, 599.

Valentine, William. See Henry W. Turner.

Vandenberghe, Ad., preparation hydrogen chloride, bromide, and iodide for laboratory purposes, A., and ii, 150.

Vandevelde, Alb. J. J., phenoxyacetic acid: phenylic phenoxyacetate and its bromine derivatives, A., i, 209.

Vanino, Ludwig, action of an alkaline solution of formaldehyde on silver haloids and thiocyanate, ii, 249.

- preparation of fuming nitric acid, A., ii, 479.

- detection of formaldehyde by means of phloroglucinol, A., ii, 703.

Vanino, Ludwig, and L. Seemann, estimation of gold and its separation from platinum and iridium, ii, 578.

Vanino, Ludwig, and F. Treubert, bismuth suboxide, A., ii, 428.

Varet, Raoul, action of ammonia on zinc and mercuric cyanides, and on haloid double salts of the latter, A., i, 98.

Vast, A. See Louis Lapicque.

Vater, Heinrich, interaction of calcium hydrogen carbonate and alkali sulphate: formation of alkali carbonates in nature, A., ii, 109.

Vaubel, Wilhelm, solubility of organic compounds in water, A., i, 317.

- bromophenacetin, A., i, 700. - molecular weight of proteids, A., i, 839.

 electrolytic production of chlorates, bromates, iodates, and hypochlorites, A., ii, 88.

molecular complexity of liquid hydrogen, A., ii, 475.

- heat of neutralisation and electrolytic dissociation, A., ii, 727.

Vedrödi, Victor, estimation of copper in vegetables, A., ii, 59.

Veit, A. See Arthur Hantzsch.

Ven, A. J. van der, occurrence of hydrocyanic acid in the Prunaceæ, A., ii, 240.

Venable, Francis Preston, nature of valence, A., ii, 470.

Verley, Albert, modification of Friedel and Craft's method of synthesis by aid of aluminium chloride, A., i, 207.

extraction and synthesis of the odoriferous principle of jasmine, A., i, 376.

- tertiary parabutyltoluene and its derivatives, A., i, 424.

Verley, Albert, action of acetic chloride on phenylic acetate in presence of aluminium chloride. Preparation of paracetophenylic acetate, A., i, 426.

application of Friedel and Craft's method of synthesis in the preparation of aromatic aldehydes and ketones under reduced pressure, A., i, 434.

formation of acetals of glycol, A., i, 665.

tuberone, the aromatic principle of the tuberose flower, A., i, 713.

--- condensation of citral with cyanacetic acid, A., i, 768.

-- condensation of citral with malonic acid, A., i, 768.

Verneuil, Auguste [Victor Louis]. See Grégoire N. Wyrouboff.

Vernon, Horace Middleton, heat rigor in cold-blooded animals, A., ii, 567.

Verwer, Hans, and Friedrich Groll, the amount of carbon in electrolytically deposited iron, A., ii, 386.

Vèzes, Maurice, complex platinum salts: oxalates and chlorides, A., i, 572.

--- complex platinum salts: oxalates and nitrites, A., i, 671, 741.

--- complex palladium salts: palladoxalates, A., i, 672.

preparation of potassium platosochloride, A., ii, 492.

--- volatilisation of osmium in a current of air or oxygen, A., ii, 492.

Viard, Georges, decomposition of barium and calcium dihydrogen phosphates by water at 100°, A., ii, 26.

water at 100°, A., ii, 26.

decomposition of monomanganous phosphate by water at 0° and at 100°, A. ii 752

A., ii, 752.
Vieille, Paul. See Marcellin Berthelot.
Vierth, M., detection of arachis oil in olive oil, A., ii, 583.

Vieth, Paul, curdling of milk after addition of soluble calcium salts, A., ii, 570.

Vignon, Léo, action of potash on oxynitrocellulose, A., i, 242.

oxycellulose osazones, A., i, 560.
 estimation of phosphoric acid, A.,
 ii, 54.

— estimation of tannin, A., ii, 135.
Vignon, Léo, and Barrillot, estimation of copper and mercury in grapes, wines,

lees and marcs, A., ii, 452.

Vignon, Léo, and Meunier, estimation of the amount of softening agent required for hard water, A., ii, 452.

Vignon, Léo, and J. Perraud, mercury in the products from vines treated with mercurial dressings, A., ii, 446. Vigouroux, Émile, tungsten silicide, A., ii. 104.

silicon and metallic silicides, A., ii, 211.

action of chlorine on a mixture of silicon, silica, and alumina, A., ii, 746.

Villard, P., solution of solids and liquids in gases, A., ii, 143.

— hydrates of gases, A., ii, 151. — chemical effect of X-rays, A. ii, 266.

Villiers, Antoine, separation of oxide of manganese, magnesia, and the alkaline earths, A., ii, 523.

Villiger, Victor. See Adolf von Baeyer. Vilmos, A. See Alfred Werner.

Vincent, Camille, and Jean Meunier, a new sugar accompanying sorbitol, A., i, 185.

Vincent, Swale. See Benjamin Moore, Edward A. Schäfer.

Vinci, Gaetano, physiological action of eucaine-B and analogous substances, A., ii, 316.

Visser, L. E. O. de, solidifying points of mixtures of stearic and palmitic acids, A., i, 255.

Vitali, Dioscoride, preparation of zinc valerate, A., i, 112.

- uric acid and the murexide reaction, A., i, 117.

presence of organic chlorine in normal urine, A., ii, 41.

 supposed existence of iodine in organic combination in the urine after administration of potassium iodide, A., ii, 116.

detection of manganese, A., ii, 251.
 some reactions of biliary acids and their detection in urine, A., ii, 263, 342.

— toxicological detection of acetylene, A., ii, 338.

detection of chlorates, bromates, and iodates in presence of each other, A., ii, 803.

Vittenet, Henri, oxidising action of α-chlorocamphor, A., i, 225.

formation of cuprous cyanide, A., i, 658.

symmetrical dinitrodiphenylcarbamides, A., i, 692.

---- symmetrical chloro-, bromo-, and iodo-diphenylcarbamides, A., i, 693.

— aromatic carbimides, A., i, 756.
— symmetrical dinitroditolylcarbamides, A., i, 810.

amides, A., i, 810.
Vittenet, Henri. See also A. Offret.
Vogl, Walther, nitrovanillin, A., i, 697.
Vogt, J. H. L., artificial cassiterite, A., ii, 562.

Volney, C. W., barytocelestines, A., ii, 495.

Vongerichten, Eduard, non-nitrogenous decomposition products of morphine. III., IV., and V., A., i, 307, 649.

 hydromethylmorphimethine, i, 551.

- β -morphimethine, A., i, 965. Vorländer, Daniel, mesityl oxide and ethylic malonate, A., i, 345.

alkyl, alphyl, and arryl, A., i, 553. - influence of carbonyl on adjacent

groups, A., i, 812.

Vorländer, Daniel, and A. S. Gärtner, action of ethylic malonate on unsaturated ketones, A., i, 259.

Vorländer, Daniel, and M. Kohlmann, conversion of hydroresorcinol into

glutaric acid, A., i, 679.

Vorländer, Daniel, and Rudolf von Schilling, determinations of the molecular weight of ethylic sodiomalonate and sodacetoacetate, A., i, 672.

Vorländer, Daniel. See also Paul Herrmann, Rudolf von Schilling.

Voswinckel, Hugo, triazan derivatives, A., i, 958.

Votoček, Emil, estimation of methylated pentoses, A., ii, 701.

Votoček, Emil. See also Karl Andrlik. Vulpius, Gustave, discrimination of eucaine and cocaine, A., ii, 392.

W.

- **Wachholtz**, F., fate of carbonic oxide in the animal organism, A., ii, 372, 503.
- Waddell, John, indicators, A., ii, 83. - benzene, acetic acid, and water, A., ii, 144.

reversible reactions, A., ii, 402.

freezing point in ternary mixtures,

A., ii, 403.

- the conversion of ammonium thiocyanate into thiocarbamide, and of thiocarbamide into thiocyanate, A., ii, 410.
- Wade, Edward Bruce Herschel, the changes of volume due to dilution of solutions, T., 254; P., aqueous **1899**, 7.
- new method of determining the vapour pressures of solutions, A., ii, 8. Wagner, E., hydroxylamine, ii, 650.
- Wagner, E. See also Alexander Ginzberg, M. Idzkowska.
- Wagner, Georg, and Kazimir Slawinski. constitution of pinene, A., i, 766.

Wagner, Georg. See J. Godlewsky, J. Majewski.

Wagner, Julius, reaction between potassium permanganate and hydrochloric acid under the influence of catalysors, A., ii, 275.

iodometry, A., ii, 326.
measuring the volume of liquids: preparation of normal sclutions, A., ii, 379.

Wagner, Paul, ammonium salts and Chili saltpetre as manures, A., ii, 572. - how much basic slag should be applied to meadows? A., ii, 690.

Wahl, H., camphopyrazolones, i, 778.

Walbaum, Heinrich, oil of neroli, A., i, 620, 621.

Wald, F., what is a chemical individual? A., ii, 276.

Walden, E. C., effect of inorganic solutions and solutions containing serum albumin on the frog's heart, A., ii, 781.

Walden, Paul, supposed identity o tannin and digallic acid, A., i, 212. - optical isomerism, A., ii, 393,

- influence of elements on the optical activity of the amyl radicle, A., ii, 537.

- interconversion of optical antipodes. IV. and V., A., ii, 538.

Waldeyer, O. See Conrad Willgerodt, See Carl Adam Bischoff. Waldmann. Waldvogel. See Schreiber.

Walker, A. J. See Karl Auwers. Walker, Claude F., and David H. N. Gillespie, iodometric estimation of acids and alkalis, A., ii, 326.

Wallace, George B., and W. A. Mogk,

action of suprarenal extract on the mammalian heart, A., ii, 310.

Wallach, Otto, substituted cyanamides

and thiocarbamides, A., i, 658.

Wallach, Otto [with Milo C. Burt], terpenes and ethereal oils. Condensation of benzaldehyde with ketones

of the terpene series, A., i, 532. Wallach, Otto [and M. Hertz], terpenes and ethereal oils: fenchone, A., i, 65.

Wallach, Otto [with E. Lipczynski, H. Löhr, and C. Ohligmacher], terpenes and ethereal oils: the carvone series, A., i, 530.

Wallach, Otto [Wilhelm Stiehl, Adolf Sieverts, and R. Sieverts], terpenes and ethereal oils: pinole, A., i, 709.

Walther, J., action of zinc chloride on amylic alcohol, A., i, 323.

Walther, Reinhold, and Th. von Pulawski, benzimidazoles, A., i, 639.

Walther, Reinhold, and St. Wlodkowski, preparation of acyl- and nitrosoderivatives of aromatic alkylcarbamides, A., i, 590.

Wang, Eyvin, estimation of urinary indican, A., ii, 458.

- results of administration of indole, A., ii, 678.

Warington, Robert, denitrification and farmyard manure, A., ii, 800.

Warnier, L. A., estimation of pentosans, A., ii, 339.

- coffee, A., ii, 794.

Warren, Charles H. See Samuel Lewis Penfield.

Warren, Henry Nepean, preparation of tungsten, molybdenum, chromium and manganese silicides, A., ii, 158.

Wasowicz. See Dunin-Wasowicz.

Wassiléeff, A., hydrocarbon, C₁₀H₁₈, prepared from active amylic alcohol and its derivatives, A., i, 785.

Watschjanz. See Carl Adam Bischoff. Wdowiszewski, Henryk, estimation of carbon in cast iron and steel, A., ii, 181.

Weber, Hermann. See Paul Jannasch. Weber, Oskar H., alteration of free energy in melted halogen compounds of some metals, A., ii, 724.

Wedekind, Edgar, orthohydroxyguan-azylbenzene, A, i, 51.

the quinquevalent asymmetric nitrogen atom. I. Occupation of space. Inactive isomerides, A., i, 351.

quinquevalent asymmetric nitrogenatom. III. 1-Hydroxypiperidiniumacetic acid, A., i, 449.

 oximes of methylic santonate and their optical behaviour, A., i, 631.

- crystalline form of piperidine hydrobromide and methylallylaniline picrate, A., i, 636.

- paracetamidoformazylbenzene, A.,

A., i, 690.

Wedekind, Edgar [and S. Bronstein] metanitroguanazylmethane and allied compounds, A., i, 828.

Wedekind, Edgar [and J. Gonswa], action of paranitrobenzylic chloride on dimethylaniline and on diphenylamine, A., i, 806.

Wedemeyer, Konrad, estimation of nitrogen by the Kjeldahl-Gunning method, A., ii, 53.

- artificial digestion of food constituents, A., ii, 460. Wedemeyer, Konrad. See also Emil

Knoevenagel.

Wegscheider, Rudolf, dissociation of gases under constant pressure and in presence of excess of one of the pro-ducts of decomposition, A., ii, 590.

Wegscheider, Rudolf, dissociation of the hydrochloride of methylic ether, A., ii, 591.

Wehmer, Carl, action of some poisons on yeast and on fermentation, A., ii, 785.

Weidenbaum, Jos., estimation of glycogen, A., ii, 529.Weiler, Max, explanation of the Fittig

Parabromotoluene synthesis. III. and sodium, A., i, 490.

- Étard's reaction, A., i, 519.

 decomposition of homologues of benzophenone by halogen acids, A.,

Weiler, Max. See also Eugen Bamberger. Weinland, Ernst, physiological relationships of lactose, especially in the intestine, A., ii, 604.

Weinland, Rudolph F., and J. Alfa, fluorine derivatives of phosphates, sulselenates, tellurates, dithionates, A., ii, 594.

Weinland, Rudolph F, and O. Lauenstein,

fluoriodates, A., ii, 363.

- fluoromanganites, A., ii, 368. - action of hydrofluoric acid on bismuthic acid and potassium bismuthate, A., ii, 370.

Weinmann, Joh., derivatives obtained by the action of carbon disulphide on dimethylaniline, A., i, 204.

Weintraub, E. See Georg Lunge.

Weisberg, Julius, solubility of lime in water and saccharine liquids, A., ii, 748. Weiss, J., formation of uric acid, A.,

ii, 504. Weiss, R. See Emil Knoevenagel.

Weissberg, J. See Carl Engler. Weller, Heinrich, estimation of starch in sausage meat, A., ii, 703. Wells, James S. C. See Victor Lenher.

Wendell, George Vincent, rotatory dispersion of tartaric acid and oil of turpentine, A., ii, 199.

Wendelstadt, Hermann, influence of alcohol on respiration in man, A., ii, 602.

Werner, Alfred, constitution of inorganic compounds. XV. Chlorosalts, A., ii, 278.

Werner, Alfred, and C. Bloch, orthobenzhydroximic chloride and derivatives, A., i, 753.

Werner, Alfred, and E. Grebe, constitution of inorganic compounds. XIX. Oxalatoplatinum compounds, A., i, 865.

Werner, Alfred, W. Megerle, J. Pastor, and W. Spruck, constitution of inorganic compounds. XVIII. pound of ethylenediamine and propylenediamine with salts of bivalent metals, A., i, 856.

Werner, Alfred, and W. Skiba, isomeric change in the benzhydroxamic group,

A., i, 690.

Werner, Alfred, Fr. Steinitzer, and K. Rücker, constitution of inorganic compounds. XVI. Complex cobalt-

ammonium compounds, A., ii, 658.

Werner, Alfred, and A. Vilmos, constitution of inorganic compounds. Oxalatodiethylenediammine-XVII. cobalt salts, A., ii, 660.

Wesenberg, G., heroine (diacetoxymorphine), A., i, 650.

Westermann, T., composition of the

waters of Danish rivers, A., ii, 514. Wetzel, G., the proteid-like substances

of silk, A., i, 466.

Τ'n., Wetzke, analysis of Swedish magnetic iron ores, A., ii, 61.

Weyl, Theodor. See G. Erlwein.

Wharton. FrederickMalcolm. See Percy F. Frankland.

Wheeler, Alvin S. See Henry Barker

Wheeler, Henry Lord, and Bayard Barnes, molecular rearrangement of alkylic thioncarbamates, A., i, 797.

Wheeler, Henry L., and T. B. Johnson, phenylparatolylformamidine and the transformation of imido-ethers, A.,

i, 269, 353, 431.

Wheeler, Homer J., George M. Tucker, and Burt L. Hartwell, observations as to whether the beneficial action of lime on the soil of the experiment station is due to any extent to its neutralising action, A., ii, 50.

Wheeler, Homer J. See also Burt L.

Hartwell.

White, John, occurrence of barium compounds in artesian well water, A., ii, 420.

White, W. Hale, and F. Gowland Hopkins, excretion of phosphorus and nitrogen in leucæmia, A., ii, 316.

Whitehead, Robert J. Gibson. See George Gerald Henderson.

Whitlock, T. C., and C. E. Barfield, dehydration of sodium phosphate crystals, A., ii, 747.

Wichelaus, [Karl] Hermann, a- and B-naphthaleneindigo, A., i, 636.

Wichmann, Arthur, crystalline forms of albumin, A., i, 838.

Wiede, O. Fritz, salts of perchromic acid, A., i, 244.

chromium tetroxide potassium cyanide, A., i, 319.

Wiedeburg, Otto, heat, energy, and entropy, A., ii, 545.

Wiedemann, [Ernst] Eilhard [Gustav], and Gerhard Carl Schmidt, electrical oscillations, A., ii, 5.

Wiedermann, Fritz. See Carl Lieber-

Wienands, Albert. See Heinrich Biltz.

Wiener, Hugo, glycocine as an intermediate product of metabolism, A.,

Wijs, J. J. A., iodine number of linseed oil, A., ii, 711.

Wilde, Henry, atomic weight of tellurium in relation to the multiple proportions of the atomic weights of other simple substances, A., ii, 148.

position of tellurium and iodine in the periodic system, A., ii, 148.

Wildermann, Meyer, the velocity of reactions before complete equilibrium, P., 1899, 175.

Wiley, Harvey Washington, influence of temperature on the specific rotation of sucrose, and a method of correcting readings of compensating polariscopes therefor, A., ii, 702.

Will, W. Watson, ash of cardamoms,

A., ii, 794.

Willenz, titration of iron in hydrochloric acid solution, A., ii, 696.

Willgerodt, [Heinrich] Conrad [Christoph], heterocyclic nuclei containing iodine in organic compounds, A., i, 586.

Willgerodt, Conrad, and Heinrich Dauner, paratolylpseudoazimidoquinoline,

A., i, 824.

Willgerodt, Conrad, and Hermann Klein, paratolylpseudoazimidonitrobenzene, picryl- and 2:4-dinitrophenyl-metaxylylhydrazine and their derivatives, A., i, 882.

Willgerodt, Conrad, and O. Waldeyer, iodoso- and iodoxy-compounds of diiododiphenylsulphone, A., i, 606.

Williams, Perey, a double iron tungsten carbide, A., ii, 104.

iron chromium carbide and iron molybdenum carbide, A., ii, 157.

Willstätter, Richard, formation of suberone from ecgonine, A., i, 26.

- action of sodium on ethylic malonate, A., i, 576.

- derivatives of ecgonine, A., i, 651. Willstätter Richard, and Wilhelm Müller, ketones of the tropine group, XII. Constitution of economic A i, 178.

Willstätter, Richard, and Walther von Sicherer, carboxylic acids of pyrrolid-

one, A., i, 633.

Wilms, Johannes, and Conrad von Seelhorst, effect of the amount of water in the soil on the amounts of nitrogen and ash in the dry matter of plants, A., ii, 609.

Wilson, Ernest, aluminium as an electrode in cells for direct and alternate currents, A., ii, 540.

Wilson, Harold A., electrical conductivity of flames containing salt vapours. A., ii, 722.

Wilson, Harold A. See also Arthur Smithells.

Wimmer. See Mecke.

Winchell, inchell, Horace V., cubanite from Butte, Montana, A., ii, 108.

Winchell, Newton H., thalite and bowlingite from Lake Superior, ii, 765.

Windaus, Adolf. See Heinrich Kiliani. Windisch, Richard, estimation of fat in milk, A., ii, 822.

Winkelmann, Adolf [August], thermal conductivity of various kinds of glass, A., i, 399.

Winkler, Clemens, germanium, A., ii, 297.

 electrolytic precipitation of metals on electrodes of platinum gauze, A., ii, 723.

Winkler, Henry von, filtering small quantities of liquid, A., ii, 277.

Winkler, Ludwig Wilhelm, method for vapour density determination, ii, 728.

solubility of bromine in water, A., ii, 742.

estimation of ammonia and nitric and nitrous acids in waters, A., ii, 805.

Winteler, F., electrolysis of the alkali chlorides, A., ii, 212, 366.

Winter, Justin, freezing point of milk, A., ii, 232.

Winterstein, Ernst, nitrogenous materials in fungi, A., ii, 240.

- preparation of pure phosphotungstic acid, A., ii, 370.

Winterstein, Ernst. See also Ernst Schulze.

Wirthle, F., "vegetale" (cotton stearin): isolation of cholesterol and phytosterol from fats, A., ii, 824.

Wiskott, F. See Johannes Pinnow.

Wislicenus. Johannes, formation carbocyclic compounds from 1:5- and 1:6-diketones, by converting them into their pinacones, A., i, 59.

vinylacetic acid, A., i, 736. icenus, Johannes, and Wislicenus, Harold Carpenter, 1:3-dibenzoyl-1:3-diphenylpropane and its reduction to tetraphenylcyclopentane, A., i, 60.

Wislicenus, Johannes, and Christoph Carl Kuhn, ethylic 1:2-dibenzoylglutarate and its conversion into 1:2diphenylcyclopentane, A., i, 60.

Wislicenus, Johannes, and Adolf Lehdibenzoyldiphenylbutadiene and its reduction to tetraphenylbenzene, A., i, 59.

Wislicenus, Johannes, and Frank H. Newman, derivatives of benzylidenediacetophenone and 1:2:4-triphenyl-

cyclopentane, A., i, 61.

Wislicenus, Wilhelm, basic copper compounds of ethylic acetoacetate and ethylic benzoylacetate, A., i, 192.

- anhydrobisdiketohydrindene (bin-

done), A., i, 219.

benzylpyruvic acid, A., i, 286.

Wlodkowski, St. See Reinhold Walther. Wobbe, Willy, distinction between mercuric cyanide and oxycyanide, A., ii, 698.

Wörner, Emil, creatinine, A., ii, 438. Wohl, Alfred, synthesis of reglycer-

aldehyde, A., i, 11.

- history of phenylhydroxylamine, A., i, 49.

Wohl, Alfred, and L. Neuberg, preparation of acraldehyde, A., i, 565.

Wohltmann, Ferdinand, specific manurial requirements of crops, A., ii, 511.

Wohlwill, Emil, electrolytic gold refining, A., ii, 105.Wohlwill, H., electrolysis of the alkali

chlorides, A., ii, 213.

Wolf, Otto. See Hans Kreis.
Wolf, W., influence of copper and zinc on hæmoglobin formation, A., ii, 231.

Wolff, John Eliot, hardystonite, a new calcium zinc silicate, A., ii, 435.

Wolff, Jos. See Max Busch.

Wolff, K. See Wilhelm Autenrieth. Wolff, Ludwig, parapyruvic acid, A.,

i, 483.

Wolff, Ludwig [and F. Heip], synthesis of uvitic acid from pyruvic acid, A., i, 514.

Richard, oxidation of Wolffenstein, organic bases with hydrogen peroxide, A., i, 495.

Wolffenstein, Richard. See also Max Auerbach, G. Bumcke, W. Hohenemser, Emil Maass, Arthur Marcuse, C. Moritz.

Wolfs, Hans. See Carl Bülow.

Wolkoff, Alesei A., and Boris N. Menschutkin, conversion of trimethylene into propylene, A., i, 196.
Wollweber, O. See Emil Knoevenagel.

Wood, Frank, synthesis of ethylic alcohol,

A., i, 182. Wood, Horatio C. See Léon Asher.

Wood, Thomas Barlow, W. T. Newton Spivey and Thomas Hill Easterfield, Part I., T., 20; P., cannabinol. 1898, 184.

Woodhead, German Sims, temperature

of the horse, A., ii, 309.

Woodman, A. G., estimation of added water in milk, A., ii, 618.

Woolcott, G. H. See Charles George

Matthews.

Worms, Wladimir, action of dilute solutions of pyrophosphoric acid on the crystalline albumin of white of egg, A., i, 655.

Worobeeff, V. von, garnet from the urals, A., ii, 671.

Worobeeff, W., preparation of zinc methyl, A., i, 871.

Worstall, Robert A., sulphonation of the paraffins, A., i, 18.

· direct nitration of paraffins: higher primary nitro-paraffins, A., i, 399.

-action of sulphuric acid on nitroheptane, A., i, 787.

absorption of methane and ethane by fuming sulphuric acid, A., ii, 527. Woulfson, W. See Friedrich Kehrmann. Woy, Rudolf, estimation of sugar in

chocolate, A., ii, 187. Wright, A. W., and D. Albert Kreider, between structural relation magneto-optic rotation, A., ii, 265.

Wright, H. E. See Winthrop E. Stone. Wróblewski, Augustin, properties soluble starch and a simple method for its preparation, A., i, 324.

— composition of Buchner's yeast ex-

tract, A., ii, 170.

- a new proteid constituent of milk, A., ii, 232.

Wyrouboff, Grégoire N., and Auguste Verneuil, extraction of thorium on a large scale, A., ii, 105.

-- constitution of the oxides of the rare earths, A., ii, 224, 423, 598.

- quantitative separation cerium, A., ii, 613.

Y.

Yardley, H. B., ash of cardamoms, A.,

Young, George, preparation and properties of naphthylcarbamides, A., i, 917.

Young, Sydney, action of chlorosulphonic acid on the paraffins and other hydrocarbons as a means of purifying the normal paraffins, T., 172; P., 1899, 22.

- the relative efficiency and usefulness of various forms of still-head for fractional distillation, with a description of some new forms possessing special advantages, T., 679; P., 1899, 147.

Young, Sydney, thermal properties of isopentane, A., ii, 633.

Young, Sydney, and Emily C. Fortey, the vapour pressures, specific volumes, and critical constants of hexamethylene, T., 873; P., 1899, 182.

Young, Sydney. See also J. Rose-Innes.

Zadik, H., metabolic experiments with proteids containing, and not containing, phosphorus, A., ii, 774.

Zaharia, Al. J., occurrence of perchlorate in Chili saltpetre: injurious action on cereals and sugar-beet, A., ii, 799.

Zaharia, Al. J. See also Constantin I. Istrati.

See Marcellus Nencki, J. Zaleski, J. Salaskin.

Zanetti, Carlo Umberto, ovimucoid, and a new glucoproteid from blood serum, A., i, 180.

hydrates, A., i, 851. Zanotti,

Zega, Alexander, butter analysis, A., ii, 823.

Zega, Alexander, and R. Majstorović, iodine number of fatty acids, A., ii, 820.

Zelinsky, Nicolai D., reductions in the presence of palladium, A., i, 181.

Zelinsky, Nicolai D., and S. Naumoff, 1:4-dimethylhexamethylene, i, 196.

Zemjatschensky, Petr A., kaolinite deposits of South Russia, A., ii, 110.

Zenneck, G., chemical stimulation of nerve - containing, and nerve - less (curarised), skeletal muscles, ii, 604.

Zetsche, F. See C. Schreiber.

Ziegele, E. See Max Busch. Zilliacus, A. See Wilhelm Ramsay.

Zimmer. See Ludwig Gattermann.

Zimmerli, Fritz. See Friedrich Kehrmann.

Zincke, [Ernst Carl] Theodor, keto bromides and methylenequinones, A., i, 265.

 methylenequinones of the dibenzyl and stilbene series, and the corresponding keto-chlorides, A., i, 616.

Zincke, Theodor, and A. Ossenbeck, isonaphthazarine, tetrahydroxynaphthalene, and tetraketohydronaphtha-

lene, A., i, 765.

Zincke, Theodor, and E. Petermann, ketochlorides and orthodiketones of phenylazimidobenzene and phenyl-↓-azimidobenzene, A., i, 135.

Zincke, Theodor, and Ph. Schwarz, orthodinitroso-derivatives of the benz-

ene series, A., i, 751.

Zinkeisen, Ed. See Theodor Curtius. Zinno, preparation of glyceric acid, A.,

i, 13.

Zoethout, William D., analogies between the physiological effects of high temperatures, lack of oxygen, and certain poisons, A., ii, 235.

Zopf, Wilhelm, compounds from lichens,

A., i, 716.

Zouboff, B., determination of the heats of combustion of some organic compounds, A., ii, 589.

Zschimmer, Eberhard, alteration products of magnesia mica: variation of the optical characters with the composition, A., ii, 768.

Zuelzer, G., lecithin and other "myelin substances" in brain and in egg yolk,

A., ii, 504.

Zunino, V., action of potash on epi-chlorhydrin, A., i, 410.

Zunz, E., fractional precipitation of the products of peptic digestion by zinc sulphate, A., ii, 504.

- the course of peptic proteolysis examined quantitatively,

ii, 774.